

SOME FUNCTIONS OF UNIVERSITIES
IN THE UNITED STATES TODAY.

by

Janis Cascille Tremper

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BOSTON UNIVERSITY
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Thesis
SOME FUNCTIONS OF UNIVERSITIES
IN THE UNITED STATES TODAY

by
Janis Cascille Tremper
(A.B., Rockford College, 1947)

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SOME FUNCTIONS OF UNIVERSITIES IN THE UNITED STATES TODAY

	Page
Introduction	v
Statement of the problem	v
Previous work on the problem	v
Method to be followed in this investigation	vi
 Chapter I. A Discussion of Hutchins's Views	 1
1. Concept of man	1
2. Theory of the state	2
3. Aims of education.	3
4. Application of educational theory.	3
5. Satisfaction of requirements of original definition	6
 Chapter II. A Discussion of Dewey's Views	 7
1. Concept of the individual	7
2. Aims of education.	10
3. Application of educational theory.	10
4. Role of school in society	13
5. Comparison of views of Hutchins and Dewey.	14
 Chapter III. A Discussion of Whitehead's Views	 21
1. Comment on metaphysics	21
2. Concept of man	24
3. Application of theory to education	26
4. Satisfaction of requirements of original definition.	30
5. Comparison with views of Hutchins and Dewey.	32

The first part of the report deals with the general situation of the country. It is a very interesting and informative study of the country's development. The author has done a great deal of research and has gathered a wealth of material. The report is well written and is a valuable contribution to the study of the country.

The second part of the report deals with the economic situation. It is a very detailed and thorough study of the country's economy. The author has done a great deal of research and has gathered a wealth of material. The report is well written and is a valuable contribution to the study of the country's economy.

The third part of the report deals with the social situation. It is a very detailed and thorough study of the country's social conditions. The author has done a great deal of research and has gathered a wealth of material. The report is well written and is a valuable contribution to the study of the country's social conditions.

The fourth part of the report deals with the political situation. It is a very detailed and thorough study of the country's political conditions. The author has done a great deal of research and has gathered a wealth of material. The report is well written and is a valuable contribution to the study of the country's political conditions.

The fifth part of the report deals with the cultural situation. It is a very detailed and thorough study of the country's cultural conditions. The author has done a great deal of research and has gathered a wealth of material. The report is well written and is a valuable contribution to the study of the country's cultural conditions.

	Page
Chapter IV. The Report of the President's Commission on Higher Education.	35
1. Summary of the Report	36
2. Discussion of proposals with reference to Hutchins's theory	46
3. Discussion of proposals with reference to Dewey's theory	52
4. Discussion of proposals with reference to Whitehead's theory	54
5. Discussion of proposals with reference to original definition.. . . .	56
Chapter V. A Student's Point of View	59
1. Comparison of concept of man in theories dis- cussed.	59
2. Comparison of concept of society in theories discussed	62
3. Comparison of functions of universities in theories discussed	65
4. Comparison of educational theories with reference to original definition.	67
5. Some suggested techniques	69
Chapter VI. Conclusions	86
Abstract.	88
Bibliography	92

1. The first part of the report deals with the general situation of the country and the progress of the work during the year. It is divided into two main sections: the first section deals with the general situation and the second section deals with the progress of the work.

2. The second part of the report deals with the results of the work during the year. It is divided into two main sections: the first section deals with the results of the work in the field and the second section deals with the results of the work in the laboratory.

3. The third part of the report deals with the conclusions of the work during the year. It is divided into two main sections: the first section deals with the conclusions of the work in the field and the second section deals with the conclusions of the work in the laboratory.

4. The fourth part of the report deals with the recommendations of the work during the year. It is divided into two main sections: the first section deals with the recommendations of the work in the field and the second section deals with the recommendations of the work in the laboratory.

5. The fifth part of the report deals with the summary of the work during the year. It is divided into two main sections: the first section deals with the summary of the work in the field and the second section deals with the summary of the work in the laboratory.

The problem to be considered in this thesis is the function of universities, with reference to the thought of Hutchins, Dewey, and Whitehead. First, either as conservative or progressive factors, the universities are among the most effective institutions in the United States. They may help to focus attention on the pressing problems or the dominant trends in the community, to crystallize thinking on these problems, and to initiate action on them. Second, the relation of a university to the values of its community is important. The type of interest in and support given to the university by the community will tend to strengthen some of those ideals which the community values; on the other hand, the university may exercise considerable influence in the community, both through its traditional program and through adult education, in reshaping or conserving those values. For these reasons, a study of the function of universities is considered important.

A great deal of attention has been given to the problem of education in our society and specifically the role of the universities. This has not been restricted to educational theorists alone. The changes currently taking place in every area of our life--technological, economic, political, and social--have extended to education. Leaders in each of these fields have carried their analyses to the problems of education. The Report of the President's Commission on Higher Edu-

cation is an example of the keen interest taken by the government in the problems of post-war adjustment in education.

Industry, labor, and church groups as well as educators and students have assessed the work of our colleges and universities and have sponsored proposals for particular emphases in education. Nor has this activity been restricted to the United States. Establishment of the United Nations Educational, Scientific, and Cultural Organization and specific programs of other agencies of the United Nations are evidences of the international concern for revitalization of education toward the understanding essential to peace.

This study is limited to an examination of the function of universities, particularly in their responsibility to society. There are two approaches which might be used for such a study. The first would be historical: discussion of the development of universities, the factors contributing to their growth, the significance of their role in a changing society, and, more specifically, the adjustments in this pattern which have been made as the institutions developed in the United States. The primary advantage of such a survey lies, I believe, in an understanding of the universities both as affected by social forces and also as directing those forces. Thus our expectations might be modified and our demands on the contributions of the universities to the welfare of the community made more reasonable.

A second approach to this study might be called normative: a study of the role various educational theorists believe uni-

1. The first part of the paper is devoted to a general discussion of the problem.

2. In the second part, we shall consider the case of a single particle.

3. The third part is devoted to the case of a system of particles.

4. In the fourth part, we shall consider the case of a continuous medium.

5. The fifth part is devoted to the case of a system of continuous media.

6. In the sixth part, we shall consider the case of a system of particles and continuous media.

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versities should play. Universities generally are not considered in isolation from other institutions of society in these theories. Rather, the problem is what a university ought to be as one of the most effective of these institutions. This is the approach of this study.

I shall discuss first the role of universities in several philosophies of education selected as representative of the major trends in educational theory, noting contrasts and similarities in their major points. The Report of the President's Commission on Higher Education will then be analysed in the light of these positions. Special attention is given to the Report because of the influence it is presently exercising and undoubtedly increasingly will exercise in directing the content and method of the work of our universities.

Perhaps the most widely accepted statement of the function of the modern university is that of the ideal tradition offered by Cardinal Newman: "It is a place of teaching universal knowledge. This implies that its object is, on the one hand, intellectual, not moral; and, on the other, that it is the diffusion and extension of knowledge, rather than the advancement."¹ Cultivation of the intellect is an end in itself, and this is the business of the university. "It educates the intellect to reason well in all matters, to reach out towards truth, and to grasp it."² The discovery of truth, the contemplation of truth, through research and systematization, is sufficient in itself, to which no demands for effects need be added. A real

1. Newman, IU, ix. 2. Newman, IU, 125-126.

training of the intellect will include a formation of a connected view of things. The student will then be able to enter into any science or profession with comparative ease, and specialized training for a vocation will not be the concern of the university.

Chancellor Hutchins of the University of Chicago may be cited as the contemporary exponent of this traditional view of a university. He too believes the intellectual virtues to be ends in themselves and that the responsibility of the university lies in the discipline of the mind and the study of the accumulated knowledge of the past. The seven virtues of the mediaeval university he considers good in themselves and good as means to happiness. Properly disciplined in this way, the student is prepared "for a life of contemplation or a life of action."¹ In our present critical hours, the duty of a university is

to recapture, revitalize, and reformulate for our times the truths which gave purpose and significance to the work of [our] predecessors...to get clear about those ends and ideals which are the first principles of human life and of organized society.²

Again, the specialized training for a profession or particular research is to be given by some other institution.

In contrast to this position in educational theory today is that of progressive educators, for whom John Dewey is a most representative spokesman. Rather than the cultivation of the intellect as an end in itself, Dewey believes that it is a means to the happiness of man, the fullest realization of man's abilities. The emphasis is placed, not on preparing the indi-

1. Hutchins, HLA, 63.

2. Hutchins, EF, 100-101.

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vidual for a contemplative life, but on the development of habits and attitudes for effective participation as a member of society. The importance of the study of our intellectual heritage is in its application to present problems. "Understanding has to be in terms of how things work and how to do things. Understanding, by its very nature, is related to action."¹

Through humanization of the sciences and recognition of the integration of specialized training with the traditional liberal arts curriculum, the work of the university will include both.

A third position which includes elements of both of these theories is that held by Dorothy Emmet, a pupil of Whitehead. With some slight modification, this is the position which is the contention of this study: The function of the university is that of preserving, interpreting, and passing on our cultural heritage, stimulating original work and research, and training free minds with a sense of responsibility to society.² The emphasis of Hutchins on the traditional content of university work is included in the first part of the description; that of Dewey on individuality and social responsibility in the second and third parts. Because it is sufficiently comprehensive to include the major points of the two positions indicated, the definition will serve as the framework in which others are examined.

1. Dewey, POM, 49.

2. Emmet, Art.(1946), 12. The original statement reads: "This function, I should describe in brief as that of preserving, interpreting, and passing on our cultural heritage in the Arts and Sciences, of fostering original work, and of turning out a succession of people with trained minds, free minds, and a sense of responsibility."

It is the last section of the definition with which this study is particularly concerned, the assumption that the ultimate objective of the university is "the training [of] free minds with a sense of responsibility to society." As a method of directing this investigation, then, the several educational theories considered will be examined with particular regard for the aspect of social responsibility.

CHAPTER I

A DISCUSSION OF HUTCHINS'S VIEWS

If one is to understand the full meaning of a definition of the function of the university, it is necessary to have some understanding of the concept of the man the theorist would educate. With a knowledge of those aspects of man's nature which are unchanging and those which develop with growth, the role of education as an aid in the development is more clear. Similarly, the degree of emphasis on man as an individual or as a member of the group will influence the social philosophy of the theorist. Finally, the values toward which men strive will be the values to which the education is dedicated. The aim of this study, then will be to examine educational theory in the light of the concept of man on which it rests.

1. The traditional view of Hutchins is based on the belief that, although environments may change, "human nature is, always has been, and always will be everywhere the same."¹

Man is a moral, rational, and spiritual being. He needs material goods...but he does not need them without limit. Preoccupation with material goods will hinder and not assist his progress toward his real goal, which is the fullest development of his specific powers...The law of human beings is wisdom and goodness.²

1. Hutchins, EF, 26.

2. Hutchins, EF, 44.

THE HISTORY OF THE
CITY OF BOSTON

From its first settlement in 1630 to the present time, the city of Boston has been a center of commerce, industry, and culture. Its history is marked by significant events, including the founding of the city, the American Revolution, and the growth of its economy. The city has played a vital role in the development of the United States, and its influence is felt throughout the world. The history of Boston is a testament to the resilience and spirit of its people, who have overcome many challenges and built a city of great achievement. The city's rich heritage is preserved in its many historical landmarks and museums, which offer a glimpse into the past. The history of Boston is a story of progress and innovation, and it continues to inspire people around the world.

Man's duty today is to participate in the moral, intellectual, and spiritual revolution--a revolution which must end the dominance of materialism in our lives.

2. Men band together into society for this development of their highest powers. The state, held together by justice, works for the common good, that is, for "peace, order, and an equitable distribution of economic goods."¹ The state is not an end in itself; rather, it is a means to the happiness and virtue of its citizens. The accumulation and enjoyment of material goods should be limited. In fact, the property which a man acquires in excess of his personal and family needs should be dedicated to social purposes. "In this view, every act of man is a moral act, to be tested by moral, and not by economic criteria."²

Hutchins believes that society will be improved when men understand what society is. The inquiry into the nature of society--and of the men who compose it--will serve primarily to illustrate its common and abiding characteristics. This involves an historical study of the concept of the good society, a philosophical study of the good life.

Men have always wanted not a different society, but a better one. What a better society is and how to get it has been one of the persistent problems of philosophy and one of the fundamental issues in the tradition of the Western World. Only those who recognize the important place that philosophy and the wisdom of the race hold in education for citizenship can hope to educate men and women who can contribute to the improvement of society and who will want to do so.³

1. Hutchins, EF, 45.
2. Hutchins, EF, 46.

3. Hutchins, EF, 38.

Education reconstructed toward the common good, as determined in the light of reason, will enable us to acquire deeply held convictions about the nature of man and the ends of life. In the light of these convictions, the direction of the revolution then may be spiritual rather than political.

3. Hutchins's metaphysics leads him also to the conclusion that the aim of education is wisdom and goodness. Study of the eternal principles of man's relationship to the universe is the purpose, and studies which do not bring us closer to this goal have no place in the curriculum. The object is the cultivation of the intellectual virtues, by means of communicating our intellectual heritage and training students in the intellectual disciplines.

This means understanding the great thinkers of the past and present, scientific, historical, and philosophical. It means a grasp of the disciplines of grammar, rhetoric, logic, and mathematics...Contemporary materials...should be brought in daily to illustrate, confirm, or deny the idea held by the writers under discussion.¹

It is the loss of the thought of the earlier ages, the subsequent "false starts, the backing and filling,"² which are responsible for the hysteria and confusion of the modern world. The fundamental problems of men, searching for happiness, are essentially the same today as they were for the ancients. The intellectual virtues, when developed, will show us the falseness of the values of materialism and the true human values with which to replace them. The result will be a saner, happier

1. Hutchins, EF, 60.

2. Hutchins, HLA, 79.

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society which will release the powers of men.

4. The basis of the university which Hutchins envisions is a program of general education for all students. This course would start with what is now the junior year of high school and continue through the sophomore year of college. It would consist of study of the greatest books of the Western world, to educate "the elements of our common human nature" and to supply a "common stock of ideas and common methods of dealing with them."¹ The Bachelor of Arts degree would be given at the end of this general course, thus giving real meaning to a degree which now merely symbolizes four years which the student has passed in an institution of higher learning; and it would satisfy those who desire the degree for reasons of social prestige.

The general education would be useful to the student whether or not he proceeded to the university.

I will admit that it will not be useful to him outside the university in the popular sense of utility. It may not assist him to make money or get ahead. It may not in any obvious fashion adjust him to his environment or fit him for the contemporary scene. It will, however, cultivate the intellectual virtues.²

To resurrect the "study of man and nature and of man and man"³ from the waves of empiricism under which it has sunk, the work of the university would be in three areas. Study of metaphysics would afford the science of first principles, study of social sciences that of man's relation to man, and that of natural science, his relation to nature. The student would

1. Hutchins, HLA, 85.

2. Hutchins, HLA, 62.

3. Hutchins, HLA, 101.

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work in each field, and the content of each would be from first principles to those recent observations which are significant in understanding them. "In a university like this it should be possible to get an education; it is possible to get one in no other way, for in no other way can the world of thought be presented as a comprehensible whole."¹ Emphasis may be placed in one of the three fields, but this is not vocational or professional training.

Departments of the university and work in research and professional schools as presently organized would be removed from the university. In their place would be separate research or technical institutes for the collection of information on social questions and for training in the techniques of the professions. The student would spend about three years in the university, on the completion of his general education. Then--and only then--would he proceed to the technical or research institute, if additional training is necessary. Thus the university would be rid of the dilemmas of professionalism, the isolation of departments and the anti-intellectualism of solely empirical and vocational study.

The attempt has been made to organize the University of Chicago along the lines Hutchins proposes, with greatest conformance in the general college program. It is his hope that "if we can secure a real university in this country and a real program of general education upon which its work can rest, it may be that the character of our civilization may slowly

change."¹

5. With reference to the definition of the function of the university in which these theories are being examined, it seems clear that Hutchins's proposals would more than satisfy the first requirement, that of preserving and passing on our cultural heritage. In the university proper, however, the second requirement would not be considered, for specific research is to be carried out in technical institutes.

Further interpretation is necessary in consideration of the third requirement, the responsibility to society. Given Hutchins's concept of society, the education which he advocates would seem to be proper training for young people. The question is of the correspondence of his theory with the facts of experience. It is my opinion that the world today needs more than young people possessing a common stock of ideas, more than knowledge of the theories, ancient and modern, of the origin and nature of society. Our young people must be concerned directly with the problems of the world today. Their education must help them to understand these contemporary problems and to work effectively to solve them. The spiritual revolution which Hutchins wants, with the dominant position of materialism lost in its achievement, may be a valid goal. But I believe this spirit must be made the very center of the education. It must correspond with the facts of a world constantly changing, and of men with creative powers whose attitudes may similarly be changed.

1. Hutchins, HLA, 118.

CHAPTER II.

A DISCUSSION OF DEWEY'S VIEWS

1. To understand Dewey's concept of the individual we might point out first what he does not mean by it. Admitting the positive heritage of the liberalism of 19th century social thought, Dewey attacks the result of its principal defect, the lack of historic relativity. This result is a concept of the individual as "something given, complete in itself." He compares it with a Newtonian atom, for "there were only external time and space relations to other individuals, save in that each social atom was equipped with inherent freedom."¹ Furthermore, these concepts were considered to be absolute, eternal truths, and the separation was made of "the Individual" and "the Social," assuming the universal to be the concrete.² Laissez-faire was then the democratic method, for simply removing external restrictions would enable the inherent freedom to be manifested.

In contrast is Dewey's theory, in which the individual must constantly grow, and both cultural and physical conditions contribute to or restrict this growth. Liberalism, then, must

1. Dewey, POM, 135. All quotations cited from Dewey are from the same source, unless otherwise indicated.

2. 18-19.

THE
JOURNAL OF THE
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OF GREAT BRITAIN AND IRELAND
VOLUME 31. PART 1. 1901.
LONDON: PUBLISHED BY THE INSTITUTE, 21, BEDFORD SQUARE, W.C.
1901.

CONTENTS.

THE ANTHROPOLOGY OF THE FUTURE. By H. H. S. GUNDEL. 1-10.
THE ANTHROPOLOGY OF THE PAST. By H. H. S. GUNDEL. 11-20.
THE ANTHROPOLOGY OF THE PRESENT. By H. H. S. GUNDEL. 21-30.
THE ANTHROPOLOGY OF THE FUTURE. By H. H. S. GUNDEL. 31-40.
THE ANTHROPOLOGY OF THE PAST. By H. H. S. GUNDEL. 41-50.
THE ANTHROPOLOGY OF THE PRESENT. By H. H. S. GUNDEL. 51-60.
THE ANTHROPOLOGY OF THE FUTURE. By H. H. S. GUNDEL. 61-70.
THE ANTHROPOLOGY OF THE PAST. By H. H. S. GUNDEL. 71-80.
THE ANTHROPOLOGY OF THE PRESENT. By H. H. S. GUNDEL. 81-90.
THE ANTHROPOLOGY OF THE FUTURE. By H. H. S. GUNDEL. 91-100.

work negatively to remove obstacles to this growth and positively to foster institutions which are favorable to it.

Secondly, in opposition to the eternality of the earlier liberalism, is the recognition "that the content of the individual and freedom change with time."¹ This is the meaning of historic relativity. Application of the experimental method to social conditions is the technique for adjusting individuality to changes in time, changes which are qualitative and internal rather than processes "subject to some law or formula outside temporal processes."²

A superficial examination of Dewey's position on this point might easily elicit the criticism that it is complete relativism, with an inadequate analysis of the meaning of the 'individual.' We must understand, rather, that Dewey examines the question as to what human nature is in two ways. The basic needs--and these include social, aesthetic, and emotional drives as well as purely physical ones--are unchanging; but attitudes and habits, the ways in which these needs are expressed and satisfied, do vary from one culture to another.

By the practical side of the question [does human nature change?] I mean the question whether or not important, almost fundamental, changes in the ways of human belief and action have taken place and are capable of still taking place. But to put this question in its proper perspective, we have first to recognize the sense in which human nature does not change. I do not think it can be shown that the innate needs of men have changed since man became man or that there is any evidence that they will change so long as man is on earth.³

1. 136.
3. 184.

2. 137.

Having recognized that there is something in the structure of human nature which does not change, however, Dewey feels that there is real danger in the inferences drawn from the fact. This is the conclusion that the manifestation of the needs also does not or cannot change. In terms of social action those who hold this view will argue that plans for social change are utopian in a futile sense: 'It is human nature to want success, self-aggrandizement, even at the expense of others, and you can't change human nature,' et cetera. These arguments are used frequently in opposition to peace movements, citing the history of civilization as a history of wars, the manifestation of man's fighting instinct. Dewey's response is that the resistance of men to change is due to acquired habits, which tend to keep things going along just about as they always have. But "civilization itself is the product of altered human nature."¹ Customs and belief modify original nature. An example is the change in the institution of slavery, regarded even by Aristotle as the natural expression of human nature.

In specifically educational terms, Dewey feels that the doctrine of unchanging human nature leads to the conclusion that there is no such thing as education. Hence, our efforts are bound to fail.

The very meaning of education is modification of native human nature in formation of those new ways of thinking, of feeling, of desiring, and of believing that are foreign to raw human nature. If the latter were unalterable, we might have training, but not education.²

1. 190

2. 189-190

An extension of this position is that the moral principles by which men must live are not only unchanging, but are also supernatural. A distinction is made between political and social morality, directed toward the good of society, and personal morality, determined by man's supratemporal destiny. The bifurcation of ethics and the disparity between the bases of the resulting codes emphasizes individuality in isolation from social participation and responsibility, making impossible the integration and self-realization of man as a member of the group. If man by his very essence is the same in all ages and cultures, what hope is there for social progress?

2. Assuming, then, that there are both fixed and plastic elements of human nature, we find concern with the latter to be the dominant theme of Dewey's philosophy of education. He does not deny that individuals are born with varying natural endowments; his disagreement is that the channeling of their expression should be predestined. The opportunity and mode of expression are greatly determined by social influences. The problem, then, is to develop those influences which encourage maximum positive expression of interest and ability in terms of social welfare. The method is to examine existing patterns of action and belief; to analyze forces at work with a view to their effect in moving toward the desired situation or to their opposition if they inhibit positive change. These questions can be considered in the light of fact and reason.

3. Dewey refers here to the experimental method. Pointing

to it as the major cause for advancement in natural science, he argues that the techniques involved must be put to work in the social sciences. The problem to which these techniques are to be applied is not whether human nature is capable of change, but how and under what conditions it is to change.

This problem Dewey says is "ultimately that of education in its widest sense,"¹ and he advocates specific points of application of experimental method in education. Primarily he is concerned with the relationship of science to the liberal arts curriculum. The two directions urged are, on the one hand, application of scientific method to the social sciences, and, on the other, less isolation of science, with emphasis on integrating science toward the collective welfare of men.

At a time when technical education is encroaching in many cases upon intelligent acquaintance with and use of the great humanistic products of the past, we find that reading and study of 'classics' are being isolated and placed in opposition to everything else. The problem of securing to the liberal arts college its due function in democratic society is that of seeing to it that the technical subjects which are now socially necessary acquire a humane direction.²

This applies not only to formal scientific study, but also to what is considered vocational training. The basis of the separation of the two aspects of the curriculum, and, in some cases, the attitude that vocational subjects should be taught to the masses who are incapable of understanding 'intellectual' things but who must supply the useful and practical services to the society, is, Dewey feels, "an open and avowed attempt to

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2. 86-87.

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return to that dualistic separation of ideas and action, of the 'intellectual' and the 'practical'...that marked the feudal age."¹ The democratic faith demands, rather, an integration of the two, an education that gives to both a scientific understanding and an insight into their significance morally and socially.

It is clear that Dewey is arguing against the formal tradition, the classical curriculum, advocated by Hutchins. Dewey does not deny the value of the study of the past, but insists that the writings bequeathed to us should be examined for the suggestions they contain, for the alternative possibilities they may present; they are never to be taken as final authority. To do otherwise is to revert to the dependence "upon the final authority of what others have found out--or supposed they had found out..."² Rather than turning from the humane to the materialistic, Dewey is asking for 'humanization' of all branches of education, specifically the sciences and vocational training; rather than neglecting the permanently rational for the temporarily expedient, he is urging that the focus be on present problems, studied in the light of past knowledge, but in terms of desirable and necessary social change as well. Information, whether of past or present, when it is given simply as such, is isolated. Information and knowledge of the values that actually work must be connected if education is to "generate the understanding of present social forces, movements, problems, and needs that is necessary for the continued exist-

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ence of democracy."¹

4. It is the definite role of the school in society which makes so important this need for greater integration of subject matter, information, and method of applying it.

There is no present event more significant than the assertion on the part of courageous and intelligent educators of the responsibility of the schools for a definite share in the evolution of a reconstructed social order. This assertion is as ²necessary for society as for educational advance.

We are not to understand that the school is to be 'used' by any group, including the government, as in a totalitarian social order, for the principles which are the starting point and the goals in a democracy and which are the basis for liberalism are the primary points of this educational theory. We must recognize, however, that the school is vitally concerned with the social values of the group. Fundamentally the school is an institution which a society erects for a specific function; "apart from participation in social life, the school has no moral end or aim."³

The aim of education, as Dewey understands it, is, in the last analysis, again the individual. The student must be sent forth with some unified understanding of the kind of world in which he is living, the direction in which it is moving, the part he will play in it. Every individual has the right, and should have the opportunity, to develop some conviction concerning his place in the social order, and the relation of this

1. 50.

2. 92.

3. Dewey, MPE, 11.

order to his welfare. But he counts only as one, equally with all others, and the social order must be determined by the cooperative expression of many people. Democracy is built on mutual consultation and voluntary agreement. Abstract disputation concerning the prior importance of the individual or the society is founded upon the false premise that the one is not deeply involved in the other. The starting point for consideration of Dewey's liberalism, his theory of education, his concept of democracy, is the individual, as a responsible participant in society; the end toward which each is directed is to enable the individual to make his full contribution in this role and at the same time to be helped by each force of the social order to realize his own potentialities.

Dewey's specific concern is with the third part of the definition of the function of the university, offered above, training free minds with a sense of responsibility to society. It is his feeling that the social aspect of man's nature has not been adequately considered in educational theory, that we fail to recognize the role of the school as a center of the values of the society. The other functions, passing on our cultural heritage and stimulating original work and research, are included in his proposals; but his insistence is on the social nature of the task.

5. In a comparison of the theories of Hutchins and Dewey, it is important to remember that both were elaborating their theories, in the works used as sources, with a negative as well

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as a positive view in mind. Each is concerned with demonstrating the weaknesses of the opposite approach, as well as with advocating the validity of his own. For this reason, there are statements in the writings of both men that seem to be of a more polemic than constructive nature.

In considering some of the outstanding contrasts, mention of the concept of man is again significant. Hutchins is emphasizing the sameness in human nature, with which his concern with first principles and his classics curriculum are in accord. Dewey agrees that there are elements in man's nature which are unchanging, that is, the physical, social, aesthetic, and emotional drives. (One might also ask if 'mind' is not unchanging for Dewey too, or if he means by it more than experience.) Nevertheless, he stresses the importance of attitudes and habits, the ways in which these needs are expressed, and the expressions do vary. The extension of these differences is evident, to a marked degree, in their views of the role of education. For example, Hutchins says,

in general education we are interested in drawing out the elements of our common human nature; we are interested in the attributes of the race, not the accidents of individuals.¹

In contrast, we may refer again to the quotation from Dewey cited above:

The very meaning of education is modification of native human nature in formation of those new ways of thinking, of feeling, of desiring, and of believing that are foreign to raw human nature.²

1. Hutchins, HLA, 73.

2. Dewey, POM, 189-190.

1. The first part of the report is a general introduction to the subject of the study. It discusses the importance of the study and the objectives of the research.

2. The second part of the report is a detailed description of the methodology used in the study. It includes information about the sample, the data collection methods, and the statistical analysis.

3. The third part of the report is a presentation of the results of the study. It includes a summary of the findings and a discussion of their implications.

4. The fourth part of the report is a conclusion and a list of references. The conclusion summarizes the main findings of the study and provides recommendations for future research.

5. The fifth part of the report is an appendix containing additional information related to the study, such as raw data, questionnaires, and interview transcripts.

6. The sixth part of the report is a bibliography listing the sources of information used in the study.

7. The seventh part of the report is a list of figures and tables, which are included in the main body of the report.

Similarly, the importance of personal experience of the individual in the educational process varies with belief as to the relative significance of changing aspects of man's nature.

Hutchins says:

Today as yesterday we may leave experience to other institutions and influences and emphasize in education the contribution that it is supremely fitted to make, the intellectual training of the young.¹

For Dewey, of course, the experiential continuum is a starting point in education. Attention must be given both to the "sources outside an individual which give rise to experience"² and to utilizing the experience of the student in making the content of the education more meaningful.

The apparent focus of the one theory on the heritage from the past and of the other on the problem of the present would also seem to follow from these differences in interpreting human nature. This, basically, is a question of values. Since the goal for Hutchins, in essence, is the freeing of the mind for the attainment of the intellectual virtues which are ends in themselves, for producing the cultured man, it would follow that the curriculum should be composed of the more static traditional courses of the liberal arts. Dewey's goal is the development of the whole personality, producing the rounded man, with a curriculum that will touch the several aspects of man's nature and work toward their integration in growth. The significant question is what each means by 'the fullest

1. Hutchins, HLA, 69.

2. Dewey, EE, 35.

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CONTENTS.
PAGES.
The Evolution of the Human Brain, by Prof. G. S. Huxley, F.R.S., and Prof. W. D. Howells, F.R.S. 1
The Evolution of the Human Brain, by Prof. G. S. Huxley, F.R.S., and Prof. W. D. Howells, F.R.S. 1
The Evolution of the Human Brain, by Prof. G. S. Huxley, F.R.S., and Prof. W. D. Howells, F.R.S. 1
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realization of the individual's abilities' as the ultimate value. The means of attaining it is determined to a great degree by the answer.

It is a case, I believe, of emphasis. Both include the physical, social, and cultural aspects of man's nature as the components, but Hutchins stresses the 'contemplative man' while Dewey stresses the 'social man.' Each is afraid his concern is inadequately considered by the other. While both are ultimately directed toward helping man to attain a more satisfactory solution of his problems, the 'intelligence' involved in the process means for the traditionalist primarily the speculative intellect, for the progressive, purposeful and effective action.

It is of interest at this point to note the differences in the type of student to whom these approaches would probably appeal. The sifting of principles and the formulation of principles from the classics are, in purest form, inculcation. The student to whom it would be most attractive is the college preparatory student of today, whose environment already influences him to continue the traditional approach. The integration of scientific studies and the 'humanization' of vocational training, on the other hand, opens the door of educational interest to a great variety of students. The more flexible curriculum and the adjustment to some degree around the particular interest of the student would make for heterogeneity both in response and in result, I believe.

Some of the disadvantages resulting from both approaches are pointed out by Algo Henderson. In a criticism of the formal curriculum, he feels that there is a separation of 'culture courses,' the background courses required in the first years, and the special courses in the major field. The cultural courses he considers to be very often a reduplication of secondary school work.

They retard intellectual maturity...they hang together badly because they are merely the introductory courses of the various fields; they invite procrastination and superficiality...Finally, this structure of general required courses is framed on the false assumption that a 'cultural' education learned in the first two years of college provides the basis for living a cultivated...life.¹

Henderson believes that it may be from this separation in this phase of his education that the student carries from college the feeling of the opposition of his working and his leisure life. "The separation fails to realize that the individual has only one life to lead, and that his culture must be a part of his daily working and living."²

On the other hand, if the initiative is to come from the student as he becomes interested in a problem and adds to his experience through pursuit of the project, again procrastination and superficiality may result. The educational instruction and guidance which are primary values may be wasted or lost.

Another object, in Henderson's opinion, is that neither approach develops the ability to think. The student is given

1. Henderson, VLE, 23.

2. Henderson, VLE, 23.

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a body of knowledge, if the method is formal, which may fail to stimulate his independent thought. In the progressive method, the problem may not challenge the student, and the research concerning it may be inadequate. This defect, of course, may well be corrected as progressive methods are tested and improved.

There are other criticisms, however, which I feel to be more basic. These apply primarily to the position which Hutchins holds. If man is a rational being whose reason and whose nature are everywhere the same, the universe must be conceived as static, apparently indicating a rational design. If our understanding of contemporary problems is to come through study of the classics of the past, it must be assumed that these recurrent problems are in essence the same as man has always conceived them to be--another unchanging aspect of the universe. And the abstract contemplation of the great thinkers--Plato, Aristotle, St. Thomas--is made man's primary interest. The tendency to bifurcate values of life into 'higher' and 'lower' is continued, with concern for the practical matters of the vocational and professional education relegated to the latter category. The dual nature of man is the basic premise.

It is a concept in contrast to this, an organistic theory of man, living in a changing world, to be educated with a body of living experience, which I feel to be more valid. A more extensive discussion and criticism from this point of view will

1. The first part of the paper is devoted to a general discussion of the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the system has solutions for all values of the parameters α and β if the function $f(x)$ is continuous and has a bounded derivative.

2. In the second part of the paper the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters α and β is solved. It is shown that the system has solutions for all values of the parameters α and β if the function $f(x)$ is continuous and has a bounded derivative.

3. In the third part of the paper the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters α and β is solved. It is shown that the system has solutions for all values of the parameters α and β if the function $f(x)$ is continuous and has a bounded derivative.

4. In the fourth part of the paper the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters α and β is solved. It is shown that the system has solutions for all values of the parameters α and β if the function $f(x)$ is continuous and has a bounded derivative.

5. In the fifth part of the paper the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters α and β is solved. It is shown that the system has solutions for all values of the parameters α and β if the function $f(x)$ is continuous and has a bounded derivative.

be made in Chapter III in a presentation of the position with regard to education through a discussion of Whitehead.

1. The first part of the document is a letter from the President of the United States to the Congress, dated January 1, 1801. It is a very important document, as it is the first official communication of the new President to the new Congress. The letter is written in a very formal and dignified style, and it contains a great deal of information about the new administration and the new Congress.

CHAPTER III

A DISCUSSION OF WHITEHEAD'S VIEWS

Whitehead's general philosophic position has direct bearing on his educational theory. Although this is not the place to discuss his metaphysics at length, a brief comment is necessary for several reasons. First, his writings on education have not been extensive, the most specific discussion being found in about one hundred and fifty pages of his collection of addresses and essays in the volume, Aims of Education. Second, his educational theory can best be understood in the light of his metaphysics, being part of a coherent system. Third, his influence on education will be indirect to a great degree, as his general theory is interpreted and applied at various points in our educational thought and action. And finally, it is the general tenor of his philosophy, rather than any specific directive to education, which I feel to be needed in educational philosophy.

1. Whitehead's concept of the world as an organism, composed of living organic entities, is at once the starting point and significant conclusion of this discussion. The dynamic process of self-creating entities inherently connected with each other is the essence of a living world with real and differentiated content.

THE HISTORY OF THE CITY OF BOSTON

The city of Boston, situated on a neck of land between the harbor and the bay, has been the seat of government since 1780. It was first settled by English emigrants in 1630, and has since that time been the center of the New England trade. The city is bounded on the north by the harbor, on the east by the bay, and on the south and west by the city of Cambridge. The city is divided into five wards, and is governed by a mayor and a city council. The city is the seat of the Supreme Court of the Commonwealth, and of the courts of the county. The city is also the seat of the University of Massachusetts, and of the Massachusetts Institute of Technology. The city is the largest city in the Commonwealth, and is the center of the New England trade.

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Whitehead's ontological principle means that "to search for a reason is to search for one or more actual entities... No actual entity, then no reason."¹

Actual entities--also termed actual occasions--are the final real things of which the world is made up. There is no going behind actual entities to find anything more real. They differ among themselves: God is an actual entity, and so is the most trivial puff of existence in far-off empty space. But, though there are gradations of importance, and diversities of function, yet in the principle which actuality exemplifies all are on the same level. The fundamental facts are, all alike, actual entities; and these actual entities are drops of experience, complex and interdependent.²

The coherence of the process which Whitehead wants to preserve is that every actual entity involves other actual entities among its components. The complex mutual relatedness of events is achieved by means of 'prehensions.' The most accurate synonym for 'prehension' is 'feeling.' "A prehension reproduces in itself the general characteristics of an actual entity: it is referent to an external world...it involves emotion, and purpose, and valuation, and causation."³

There are three factors involved in a prehension. First, there is the occasion of experience of which the prehension is an activity. Second, there is one (or more) other entity to which the prehension is a response. Finally, there is the 'subjective aim' or the purpose of the original entity, which determines whether the prehension will be a positive one, bringing into the process of development the contribution of the entity felt, or a negative one of rejection, if there is

1. Whitehead, PR, 33,25.
3. Whitehead, PR, 25.

2. Whitehead, PR, 27-28.

a conflict.

This relatedness of entities, by means of prehensions, is a "real individual fact of togetherness,"¹ a society of entities. Although this society is composed of many facts directly relevant to a particular entity, it can be treated as if it were one actuality, as we habitually consider them. The ultimate real units are together, not because they are placed in some rigidly geometrical system, but because their essential natures mutually involve one another. The relationships are inherent in the nature of things. This is Whitehead's explanation of the obvious solidarity of the world.

The constant activity within each entity is the key-note to the dynamic nature of the process. Each actual occasion is continuously engaged in the process of prehending other elements of its experience, incorporating or rejecting them in the light of their contribution to the realization of its purpose, fulfilling its purpose and hence becoming an object to be prehended by other actual occasions. Thus, the activity is a self-creative one. Actually, this process of concrescence is going on in rapid succession in each entity, but the fact that each occasion may serve as an element in its own datum, as well as for that of others, gives continuity to the process. Thus, each occasion contains in the present moment of its experience both its past and a certain degree of its future: the former insofar as the satisfaction of the preceding stages of its

1. Whitehead, PR, 26.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry, no matter how small, should be recorded to ensure the integrity of the financial data. This includes not only sales and purchases but also expenses and income. The document further states that regular audits are necessary to verify the accuracy of these records and to identify any discrepancies. It also mentions that proper record-keeping is essential for tax purposes and for providing a clear picture of the company's financial health to stakeholders.

The second part of the document outlines the procedures for handling customer orders. It begins by stating that all orders must be received in writing, either by mail or through a formal order form. Once an order is received, it should be immediately entered into the system and a confirmation should be sent to the customer. The document then describes the steps for picking, packing, and shipping the goods, ensuring that each item is carefully inspected before being dispatched. It also includes instructions on how to handle returns and exchanges, emphasizing the importance of a fair and efficient process for the customer.

The third part of the document focuses on the management of inventory. It explains that a regular inventory check is crucial to avoid stockouts and to ensure that the company has enough goods to meet customer demand. The document provides guidelines for how to conduct these checks, including the use of physical counts and the application of the FIFO (First In, First Out) method. It also discusses the importance of maintaining accurate inventory records and how these records can be used to analyze sales trends and optimize the supply chain.

The final part of the document discusses the overall financial management of the company. It highlights the need for a budget and how it should be used to guide financial decisions. The document also touches on the importance of monitoring cash flow and ensuring that the company has sufficient funds to cover its obligations. It concludes by stating that effective financial management is key to the long-term success of the business.

concrecence have served as elements in its datum; the latter as its subjective aim gives direction to its continuing prehensions.

2. Although the basic unit of reality is an actual entity, the range includes both the simplest occasion of experience and the most complex, which is man. [This is inaccurate insofar as God, in his consequent nature, is also an actual entity. However, God's nature is twofold. His primordial nature is the realm of eternal objects, or potentiality, thus differentiating him from other actual entities.] Actually, man is a society of entities, but--as pointed out above--such a society may be treated as one actuality. The fact that he is of the same essence as the simplest unit of reality is evidence of the truly organic connectedness of a living world.

There are three other concepts which characterize this process, according to Whitehead, which are relevant to this discussion. The first two of these, adventure and novelty, may be considered together in reference to their significance in enriching the process of development. All of life, in Whitehead's terms, may be considered one of movement and adventure, continuous birth and death and rebirth, but with the constant theme of adventure, "the search for new perfections."¹ There is a zest in life for exploration of variations.

Spontaneity, originality of decision, belongs to the essence of each actual occasion. It is the supreme expression of individuality: its conformal subjective form is the freedom of enjoyment derived from the

1. Whitehead, AI, 332.

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enjoyment of freedom.¹

With this freshness, there is an integration of the content of experience, an interweaving of actuality with potentiality. This fusion proceeds throughout nature, and is the way in which novelty enters the world. There is always the possibility of a novel combination of the actual and the ideal.

The third significant idea is the relationship of speculative thought to scholarship.

For progress, both are necessary. But, in fact, on the stage of history they are apt to appear as antagonists. Speculation, by entertaining alternative theories, is superficially sceptical, disturbing to established modes of prejudice. But it obtains its urge from a deep ultimate faith, that through and through the nature of things is penetrable by reason. Scholarship, by its strict attention to accepted methodologies, is superficially conservative of belief. But its tone of mind leans toward a fundamental negation. For scholars the reasonable topics in the world are penned in isolated regions, this subject-matter or that subject-matter. Your thorough-going scholar resents the airy speculations...of uncomfortable generality.²

The conflict and interplay of scholarship and speculation is one aspect found throughout the history of the adventure of ideas. There have been periods of a proper balance, but moments of greatness seem to indicate a certain excessiveness as a necessary element. A moment of rash speculation may result in a flash of intuition giving a vibrant and valid new direction to thought. "Thereby it gives the reason for the tragic transience of supreme moments in human life."³

Speculative thinking encourages the possible profits of

1. Whitehead, AI, 332.

2. Whitehead, AI, 137-138.

3. Whitehead, AI, 139.

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thrusts of imagination, of valuable apprehensions, of considerations not in the scope of immediate experience or scientific induction. Although bound by the same requirements--of rigorous logic and empirical coherence--it allows for adventure and novelty in ideas.

3. Certain general applications of these points of Whitehead's philosophy may be made to educational theory. First, there is the recognition that the world to be studied is not a collection of matter to be observed and commented upon, but rather is itself a dynamic process of which the observing mind is an active part. For example, the connectedness, through the power of feeling, of the simplest drop of experience and the most complex (that is, the mentally effective) gives real and vital meaning to the problems of social relations. It gives motivation for integration from the very essence of reality itself.

Further, the nature of the occasion and the means by which it is related to its environment transcend the relationship made valid by logical deduction, scientific induction, or association through sensation, by means of feeling. Feeling can give in addition both purpose and valuation, plus a certain power of warmth of emotion.

And if we examine the nature of the self-creative actual occasion, two more aspects are significant. The emphasis on the importance of the present is achieved without loss of the past or future, for the history of the event is included in its

present moment along with the direction of its continued development. In this growth there is the necessary acquiescence with the laws of logic and the physical world, while at the same time the main body of the immediate experience of the occasion (which again emphasizes feeling) is the content from which the occasion selects to enrich its concrescence. From the never-ending possibility of novelty in this selection and in its combination with the ideal, all part of the adventurous dissatisfaction with achievement and the quest for new perfection, there may arise a keenness of intensity swept up in the reachings of speculative thought to return again like a fresh breath of new insight.

The explicit application of Whitehead's philosophy in terms of educational theory, as mentioned above, is found in Aims of Education. Four main lines of this theory are distinguished in a very able essay by Henry W. Holmes. For succinctness and specificity in discussion, I shall list these points as Mr. Holmes presents them.

1. Education ceases, denies its own ends and its essential nature, rots what it should keep alive and sweet, the moment it forgets that children are living, growing, active organisms making their way into a world whose only valid meanings are achieved within the living present.¹

This first point rests on the concept of the child, as a society of complex actual entities, developing in self-activity, in and for whom the present moment is the consummation of the past.

1. Holmes, Art. (1941), 635.

The similarity to the 'child-centered' approach may seem obvious. In Whitehead's theory, however, I think there is greater emphasis on the organized content of the experience of education, as, for example, in mathematics and science. There is the same recognition that if knowledge is to be more than mere information, it must be involved in some degree of present activity.

2. Education becomes and remains a living process, and it has personal and national importance, only as it is useful in some way at every point in personal growth and only as it eventuates in specialized power, conscious of its own inherently demanded 'style,' in a form of work which is socially valuable.¹

This is an application of the concept of the child as growing through its positive and negative prehensions, that is, through using the facts of its experience.

It is desirable at this point to mention Whitehead's discussion of the problem of training for a profession, "an avocation whose activities are subjected to theoretical analysis, and are modified by theoretical conclusions derived from that analysis."² The analysis is to be made in terms of the purposes of the profession, and the modification of the purpose in the process of attaining the goal. The purposes are not a collection of specific goals, but rather the conclusions of theoretical analysis and the problems of practical application. The important point is that both theory and practice are involved in the training, and that neither one alone is adequate.

1. Holmes, Art. (1941), 636-637. 2. Whitehead, AI, 72.

It follows, of course, that the conflict between vocational and liberal education is considered false.

It should also be noted that the dual purposes of education are personal growth and the training to satisfy social responsibilities. It is not enough that the child be exposed to ideas; he must learn something well which will be useful, both for personal satisfaction and community benefit.

3. Education must take account of the periodic character of growth and of the rise and fall of energy in interest and the power of attention, and of the balance between the need for grasp of the external and unyielding essentials both of the organized thought to be mastered and the social demands to be met.¹

This is primarily a psychological concept of the rhythm of growth. The concern both with the freedom of the development of individual understanding and the compulsion of the external body of facts is relevant to the discussion of Hutchins' and Dewey's positions.

One of the criticisms of Dewey's approach mentioned above--that the study may be superficial if the impetus is to come only from the child engaged in the solution of a problem--is pointed up by the recognition that other factors of growth do not permit a theory resting on the premise that a constant degree of interest and perseverance will be manifested by the child. The problem-centered approach seems valid primarily for the early years of the child's education; it is to be hoped that as the student matures, his ability to grasp abstractions, to gain

¹. Holmes, Art., (1941), 638.

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insight into scientific and historic meanings, will increase. Perhaps improvements in the methods of progressive education take account of this fact.

At the same time, neither would Whitehead support the formalist approach of Hutchins, advocating a fixed transmission of our common cultural heritage. The symbolic code--which is that part of the heritage which can be transmitted--must constantly be subjected to revisions, in order to assure health and vigor to thought. But the imposition of this code without re-examination of it stifles thought. Again, the rhythmic concept of psychological approach would preclude a fixed curriculum of the sort advocated.

4. The ultimate ends of education are living religion, living aesthetic enjoyment, and a living courage which urges men toward new creative adventure.¹

The essential creativity and the provision for novelty are certainly implied in this statement. But there is, in addition, the inclusion of the force of the sense of value and importance, which is expressed in wonder and reverence, in adventure and curiosity, and the zest that drives us toward the realization of perfection. There is a vitalizing power in religion, in an experience of beauty, in the activity of creation, in which we are joined with something bigger than and beyond ourselves.

4. An analysis of Whitehead's theory with reference to our definition of the function of the university would show, I believe, that each of the requirements is satisfied. First, as l. Holmes, Art. (1941), 639.

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suggested by the definition, there is interpretation, as well as transmission of our cultural heritage, called for by the principle that the present is the consummation of the past, that meanings are valid in terms of the present, that information must be used in order to become knowledge for the student. The demand for both scholarship and speculation includes the second point of the definition, stimulating original work and research. The scholarship will bring forth the research; the speculative thought will contribute the originality and imagination.

It is the combination of these points which works toward the satisfaction of the third requirement, training free minds with a sense of responsibility. The individual must be freed from ignorance about his heritage and the significance of that heritage in the present situation. The metaphysics on which Whitehead's theory rests makes social responsibility necessary to existence. Only for purposes of abstraction can the individual be considered in isolation. In his very essence he is a society, or a combination of a series of societies. And as his concrescence continues, he will be able to realize his subjective aim only through proper adjustment to the elements of his environment. He is further responsible for action in terms of the on-going process in the environment in which he is participating. Specifically in education, Whitehead says that the student must be given the education that leads toward personal growth, including some sort of "specialized power...in

a form of work which is socially valuable."¹

5. The highlights of a comparison of Whitehead's educational theory with that of Dewey and Hutchins have been indicated, but may be noted here again in summary. The dissimilarity with Hutchins's concept of man is the basic striking contrast. Rather than a predominantly static world, in which man disregards as much as possible his physical needs, in order that he may cultivate the more worthy intellectual virtues, Whitehead offers a belief in the living quality of the world, composed of men constantly engaged in the process of development. The contrast with Dewey's concept is less obvious. I would say, however, that Dewey does not penetrate as Whitehead does to a coherent metaphysical analysis; further, that his working concept has less of the fullness and richness of the creativity of Whitehead's. Perhaps this may be explained by the fact that Dewey's philosophy derived from his thinking about education. He was arguing for a correction of existing educational practice, for the addition of new insights; he was not primarily a metaphysician. Specifically, Dewey is concerned with emphasizing the social aspect of man's nature which he feels has been inadequately handled as a major point in educational theory.

There is in Whitehead recognition of the need both for freedom and for compulsion. The freedom of creativity, of searching after new perfections, of rearranging and

1. Holmes, Art. (1941), 637

reinterpreting the facts of past experience, is limited by the demands of membership in society and by the valid principles of our tradition which may reasonably still bind that society. Hewould agree with Dewey, however, on the importance of concern with men's attitudes.

I am not alluding to the mere fact that men change their opinions, with the advance of age, or with the advance or decay of knowledge. The important point is the way in which opinions are held, and the weight attached to particular modes of statement.¹

The educational theory which results in Whitehead's thought, then, will demand more than passing on our cultural heritage. A student must be given socially useful training along with that heritage, and must learn his responsibility to use it. At the same time, the narrowness of too strict emphasis on science in education is recognized in the need to get more than science and common sense offer us, to use greater imagination both in content and method of education.

It is again a question of supplementing scholarship--whether it be of a naturalistic, empirical, or scholastic method--with speculative thought. In the concluding paragraph of a discussion of cosmologies, Whitehead writes,

But modern scholarship and modern science reproduce the same limitations as dominated the bygone Hellenistic epoch, and the bygone Scholastic epoch. They canalize thought and observation within predetermined limits, based upon inadequate metaphysical assumptions dogmatically assumed. The modern assumptions differ from older assumptions, not wholly for the better. They exclude from rationalistic thought more of the final values of existence. The intimate timidity of

1. Whitehead, AI, 134.

professionalized scholarship circumscribes reason by reducing topics to triviality for example...It then frees itself from criticism by dogmatically handing over the remainder of experience to an animal faith or a religious mysticism, incapable of rationalization. The world will again sink into a boredom of a drab detail of rational thought, unless we retain in the sky some reflection of light from the sum of Hellenism.¹

1. Whitehead, AI, 151

CHAPTER IV

THE REPORT OF THE PRESIDENT'S COMMISSION ON HIGHER EDUCATION

The return of hundreds of thousands of veterans to institutions of higher education following the war has been a severe test of the resources of those institutions. Recognizing this problem, President Truman in July, 1946, appointed a commission composed of civic and educational leaders to "reexamine our system of higher education in terms of its objectives, methods, and facilities; and in the light of the social role it has to play."¹ The results of the work of the Commission have been published in six volumes under the general title, Higher Education for American Democracy. Volume 1, "Establishing the Goals," appraises the most pressing national problems and defines the major goals of education in terms of those problems. Volume 2, "Equalizing and Expanding Individual Opportunity," considers the barriers presently existing in higher education and the means for removing them to establish equal opportunity. Volume 3, "Organizing Higher Education," offers an appraisal of national, state, and local organizational problems in education. Volume 4, "Staffing Higher Education," presents the recommendations of the Commission for expansion and improvement in the preparation and in-service education of faculty personnel.

1. Zook, HEAD, I, iii. The following quotations cited from the Report are from the same source unless otherwise indicated.

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Volume 5, "Financing Higher Education," is a discussion of the fiscal needs and policies necessary for the program recommended by the Commission. Volume 6, "Resource Data," is a compilation of some of the information used in preparation of the Report. It is with Volume 1, which sets the pattern of the Report, that this study is especially concerned.

1. The tendency of greatly increased numbers to seek higher education has been concurrent with several other developments which make the need for education more critical. First, the complexities of technological progress have made essential an increased understanding of intergroup and interpersonal relations. Second, the diversity of peoples within the United States has contributed to increased tensions; a dynamic unity must be created within this diversity for cooperation among persons and vocational and cultural groups. Third, the problems following World War II and the changing role of the United States in foreign relations urgently require of our citizens much broader knowledge of other peoples for international understanding. Finally, the atomic age has intensified the demands on higher education to prepare for the social and economic changes which will follow the application of atomic energy to industry, for the responsibilities of citizens in a democracy in an uncertain future.

The first question raised in the Report is: what type and amount of general and professional education is needed for a

fuller realization of democracy? "To liberate and perfect the intrinsic powers of every citizen is the central purpose of democracy, and its furtherance of individual self-realization is its greatest glory."¹ Thus it is of fundamental importance that individual talents be discovered, trained, and utilized. If our citizens are to assume their responsibilities as well as their rights, they must be free to exercise discriminating judgments as well as free from external restraints.

It is the assumption of the Report that education must be concerned primarily with developing the native capacities of each student and with developing the attitudes and values that equip men to live in a free society. The concept of man on which the Report rests is indicated only by implication. The Report considers primarily the social aspect of man, both from the standpoint of the individual and also from that of the society.

Both those social values which men hold in common and those which they hold individually must be considered. But the differences in men are recognized in the democratic principle of equal freedom and equal rights for all members, for our democracy depends "on the minute division of labor and at the same time upon the orchestration of an enormous variety of talents."² The opportunity to learn to make the most of one's native talents is the birthright of every citizen.

The second question raised in the Report is, how can education best guide us toward international understanding and

The first part of the report deals with the general situation of the country and the progress of the work during the year. It is followed by a detailed account of the various projects and the results achieved. The report concludes with a summary of the work done and the plans for the future.

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cooperation for peace? The issues of international relations demand "informed minds and a liberal spirit" for their resolution. Education is responsible for the diffusion of ideas "to help our own citizens as well as other peoples to move from the provincial and insular mind to the international mind."¹

Finally, the question is, how can we "apply our trained intelligence and creative imagination...to the problems of human association?"² We must use fully the scientific method of investigation and our skill in adaptation and invention. Science must be used to contribute to man's well-being rather than to his destruction. Leadership must be trained and research programs undertaken to develop a positive social policy, for the laissez-faire method of social drift is totally to the complexities of the world today.

The methods proposed by the Commission depend first on a removal of the barriers to education. These obstacles may be economic, they may result from regional variations in the quality of educational facilities, or from the economic status of the student's family. They may be the consequence of a restricted curriculum which fails to include training of aptitudes other than verbal skills or intellectual interests. Racial and religious discrimination operate in segregation and quota systems. The consequences of these inequalities of opportunity are that millions of students are denied their right to the training of their abilities and that a society whose members

are inadequately prepared to assume their personal, social, and civic responsibilities confronts grave problems.

The steps recommended by the Commission to reach the objective of equal opportunity are: improvement in the high school education for all youth; extension of education through the fourteenth grade, as in the community college, on a tuition-free basis; provision of financial assistance for students in need in the tenth through fourteenth grades; lowering of tuition costs in graduate and professional schools, along with a federal program of scholarships and fellowships; expansion of adult education programs; accessibility of public education at all levels regardless of race, sex, creed, or national origin. Federal aid will be necessary for improvements mentioned as well as for those in educational equipment and personnel.

As more and more students are brought to the colleges and universities, the diversity of needs to be met greatly increases. Yet there must continue to be a unity within this diversity, unless social chaos is to ensue. The goal is educating free men to live in a free society.

The knowledge and experience necessary for personal balance and for effective citizenship the Commission feels is not being integrated adequately by the present liberal arts program, particularly because of the splintering effect of overspecialization. To remedy this situation, the Commission proposes a program of general education which will provide the proper relationship between transmission of our common cultural

heritage and specialized training. General education differs from the traditional liberal education in shifting content "from its original aristocratic intent to issues of contemporary society."¹

The specific objectives of general education as outlined are:

1. To develop for the regulation of one's personal and civic life a code of behaviour based on ethical principles consistent with democratic ideals.²

The Commission believes that the basis for these ethical principles may vary. For some persons the democratic creed itself will offer a satisfactory moral code; for others, philosophy or religion will provide the code. This is an expression of a central problem of democracy, that of discovering a common level of action toward accepted objectives with allowance for variety of motivation.

2. To participate actively as an informed and responsible citizen in solving the social, economic, and political problems of one's community, State, and Nation.

3. To recognize the interdependence of the different peoples of the world and one's personal responsibility for fostering international understanding and peace.³

The students should recognize clearly and apply the concept of social planning to the problems of the divergence between our democratic ideals and our present society. An especially important method is the employment of the campus itself as a laboratory of democracy, conducting the college "as a community

1. 49.
3. 51.

2. 50.

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF CHEMISTRY

LABORATORY OF ORGANIC CHEMISTRY

REPORT OF RESEARCH

BY

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rather than as a hotel."¹ Off-campus work, study, travel, and research projects can do much to break down the isolation of the college from the community.

4. To understand the common phenomena in one's physical environment, to apply habits of scientific thought to both personal and civic problems, and to appreciate the implications of scientific discoveries for human welfare.²

The scientific method and its application are considered even more important for the student to learn than the data of the sciences.

5. To understand the ideas of others and to express one's own effectively.³

There is little debate on the importance of the ability of communication, which includes listening as well as talking and reading.

6. To attain a satisfactory emotional, and social adjustment.⁴

Consideration of the problems of personality as well as the training of the intellect is emphasized here, with a study of the nature of human behaviour, the role of the emotions, and the application of this knowledge to one's own adjustment both in formal study and in the experience of a wide range of activities suggested as specific methods.

7. To maintain and improve his own health and to cooperate actively and intelligently in solving community health problems.

8. To understand and enjoy literature, art, music, and other cultural activities as expressions of personal and social experience, and to participate to some extent in some form of creative activity.⁵

The Commission feels that a signal defect in our education and in our culture is the failure to recognize works of art as statements of experience. Appreciation of the arts as forms of human expression and intensified sensitivity to beauty are necessary, for the encouragement of artistic expression is considered to be now a question of social responsibility rather than of wealthy patronage.

9. To acquire the knowledge and attitudes basic to a satisfying family life.

10. To choose a socially useful and personally satisfying vocation that will permit one to use to the full his particular interests and abilities.¹

If a man's vocation can also serve as a means of self-realization, the conflict between his working and leisure life will not exist; he should gain greater satisfaction from his work and perhaps a more vigorous and significant use of his leisure. The distinctions of social status of occupations should also be erased, in accordance with the principle of the equal dignity of all kinds of work. It is to be assumed that this judgment rests on the general social value of the work in terms of the great diversity and division of labor required in our society.

11. To acquire and use the skills and habits involved in critical and constructive thinking.²

Two assumptions of liberal education are criticized particularly. The first is that the study of "Latin and Greek, mathematics and formal logic are the most effective instruments for developing the power to think."³ It is suggested

1. 56.
3. 57.

2. 57.

that many other disciplines can also develop this power. Second, the acquisition of information has been considered the work of education. It is suggested that the process of inquiry, stimulation of intellectual curiosity and imagination, the ability to appraise, judge, and integrate, have a more lasting effect.

The methods for implementing these objectives will vary. No single course can be prescribed for all students. Some general techniques apply throughout the educational process, such as effective use of campus activities for educational benefit, integration of general and vocational education to provide a proper combination of the two at appropriate levels, proper guidance and counselling service to adapt instruction to the individual student.

The Commission recommends several specific means to achieve the expansion of educational opportunity with the increased diversity of offering it considers essential. First, an increase in number and activity of community colleges will help remove the barriers of geography and expense and will help to carry out the proposal that education should be available through the fourteenth grade for those able and interested. The community college may offer the junior college program of preparation for the last two years of college work, but its primary work should be a terminal program for two-year graduates. This program should include both general education and vocational training, primarily for semi-professional work.

The senior liberal arts college will still have to check its present tendency toward over-specialization. Although there will be concentration in the junior and senior years, it must be built upon a wider range of objectives. Many students do not aim to become specialists and should not be so educated; those who do should understand the relationship of their specific concern to broader issues.

The emphasis throughout the Report on the importance of general and liberal education results from the recognition of the Commission "of the shade into which they have fallen and from which, for the good of society, they must be rescued."¹ The importance of professional schools is not forgotten. The specific suggestion in this regard is that surveys be undertaken to determine the numbers to be trained in the various professions. Estimating such future needs is a complex task and may easily be inaccurate. Nevertheless, according to government statistics, great needs still exist in almost every professional field, except perhaps in engineering, and vocational planning is necessary. Further, the professional schools should not permit strict specialization too early, at the expense of general education which is necessary to give breadth to the training.

The Commission feels that thorough revision is necessary in the graduate school. Since less than a third of those who hold the Ph. D. degree are engaged primarily in research, whether it be for education, or government, or industry, and

since more than a fourth are going into non-academic work, the concept of specialized research as the function of the graduate school is no longer adequate in the light of contemporary needs. This work must certainly be continued, but along with it there should be training for experts in non-academic service and for teachers in all levels of higher education. A new definition of scholarship is needed, which will "include interpretive ability as well as research ability, skill in synthesis as well as in analysis, achievement in teaching as well as in investigation."¹ The detached scholar must also have a concern for improvement of social conditions. "A more careful screening of applicants for graduate education, with equal concern for qualities of personality and for potential scholastic achievement, should go far to improve the final product."² Beyond this, although reiterating various suggestions, the Commission merely raises the problems and offers no other proposals for reform.

The research program is complicated by the fact that three major sectors--the universities, industry, and government--are engaged in research projects. There is a consequent shortage of manpower and of funds, with the university generally having inadequate financial resources and therefore losing in the competition for personnel. The Commission believes that there should be a division of the task, with basic research primarily the concern of the universities, and applied and developmental research that of industry and the government. Further, federal financial aid should be given particularly through assistance

The first part of the report is devoted to a general
description of the project and its objectives. It
states that the purpose of the study is to
investigate the effects of the proposed
changes on the system. The second part
describes the methodology used in the study,
including the data collection and analysis
techniques. The third part presents the
results of the study, showing the impact of
the changes on the system. The final part
concludes the report and provides recommendations
for further research.

to students in the form of scholarships and fellowships, allowing the recipient to determine the area and institution in which he will work. Basic research should not be controlled or left to private hands, including the military, or to commercial interests; it should be devoted to the general welfare.

The problems raised by the Commission and the solutions offered in this examination of higher education are viewed in the light of the social role of education. The pervasive emphasis is on reorganization of aims and methods to meet changing situations and to solve contemporary problems. Colleges and universities should become the means for enabling and encouraging the student to "carry his education, formal and informal, as far as his native capacities permit."¹ The wide range of capacities and purposes of the increased number of students must be unified by a community of values and ideas.

The complexity of modern society requires a great variety of talents and many kinds of competence for its successful functioning; yet without some communality of purpose, values, and experience we shall not achieve the reconciliation of differing opinions and interest that is the lifeblood of democracy.²

2. In order to understand more clearly the underlying direction of the Report, a comparison with the theories and proposals of Hutchins, Dewey, and Whitehead may be of help.

Chancellor Hutchins has written a very sharp criticism of the Commission's Report. He has attacked many of the goals and proposals of the Commission as well as the method used.

1. 101.

2. Hutchins, Art. (1948), 107.

For example,

the report...reflects the educational system with which it deals. It is big and booming. It is confused, confusing, and contradictory. It has something for everybody. It is generous, ignoble, bold, timid, naïve, and optimistic...It is antihumanistic and anti-intellectual. It is confident that vices can be turned into virtues by making them larger... Every cliché and every slogan of contemporary educational discussion appear once more. Much of the report reads like a 4th of July oration in pedagogues. It skirts the edge of illiteracy, and sometimes falls over the brink. And, when the battle is ended, the field is strewn with the corpses of the straw men the Commission has slain.¹

Hutchins does agree with parts of the Commission's work, as, for example, the position on barriers to equal opportunity to education and the use of scholarships as the best means for the necessary federal aid without federal control.

The basic criticism which Hutchins makes is that the proposals of the Report indicate that education is to do everything, that they are so vague and general as to be meaningless, if not contradictory. As an example, Hutchins says,

the Commission seems to think that education should be infinitely diversified; but it says...'yet in the midst of all the necessary diversity we must somehow preserve and expand a central unity. We must make sure that the education of every student includes the kind of learning and experience that is essential to fit free men to live in a free society.'²

An examination of the context of this discussion in the Report shows, I believe, that the contradiction is not of the sort Hutchins indicates. The Commission states clearly that it wants two things: on the one hand, sufficient variety of curricular offering and teaching method to make the education

1. 103.

2. Hutchins, Art. (1948), 112-113.

The first part of the paper discusses the importance of the study and the objectives of the research. It also mentions the scope of the study and the limitations. The second part of the paper discusses the methodology used in the study. It mentions the data sources and the statistical methods used. The third part of the paper discusses the results of the study. It mentions the findings and the conclusions. The fourth part of the paper discusses the implications of the study. It mentions the policy recommendations and the future research.

The study was conducted in a systematic and rigorous manner. The data was collected from a representative sample of the population. The statistical methods used were appropriate for the data and the research objectives. The results of the study are presented in a clear and concise manner. The findings are discussed in detail and the conclusions are drawn based on the evidence. The implications of the study are discussed and the policy recommendations are provided. The future research is also mentioned.

The study has several strengths. First, it is a large-scale study that involves a large number of participants. Second, it is a longitudinal study that follows the participants over time. Third, it uses a variety of data sources to collect information. Fourth, it uses advanced statistical methods to analyze the data. Fifth, it provides a detailed and comprehensive analysis of the data.

The study has several limitations. First, it is a cross-sectional study that only provides a snapshot of the data at a single point in time. Second, it is a self-reported study that relies on the honesty and accuracy of the participants. Third, it is a correlational study that cannot establish causality. Fourth, it is a descriptive study that only provides information about the current state of affairs. Fifth, it is a general study that may not be applicable to all populations.

significant to the many students, each of whom brings to it a varied background of experience, and on the other hand, a unifying element in the nature of the ultimate objective of the varied approaches, that is the training of responsible citizens. The criticism may properly be made that the statements lose meaningfulness in their lack of specificity, but I do not believe that they indicate a basic contradiction of purpose.

Again, Hutchins says,

We are told...that 'to assume that all we need to do is apply to present and future problems 'eternal' truths revealed in earlier ages is likely to stifle creative imagination and intellectual daring.' A few pages farther on...we learn that 'the everlasting moral essence of democracy lies in its fundamental principles, not in its means and methods of the moment.'¹

Once more I believe the apparent contradiction is in the generality of the Commission's statements. The first is a criticism of Hutchins's educational theory. The criticism, however, is not developed, and attacks what is assumed to be the essence of his theory without a consideration of some of the modifications and applications of the theory, and thus is slightly inaccurate. The second statement refers to a different sort of 'fundamental principle,' that is, the belief in the inherent dignity of the individual, which is basic to the democratic creed, as well as to the educational theories of Hutchins, Dewey, Whitehead, and many others.

It must be remembered that Hutchins is very definite about the subject matter of higher education. The divergence in
1. Hutchins, Art. (1948), 112.

perspective of the members of the Commission makes proposals definite to this degree impossible. The Commission had to strive simply for a framework which would incorporate the points on which there was agreement and at the same time be sufficiently flexible to include the differences of opinion concerning specific content.

The relationship of general and vocational education is another point at which Hutchins is in disagreement. The Commission says that the two are complementary. Hutchins says that the Commission offers evidence that general education will not interfere with vocational, but fails to show that vocational will not interfere with general. Greater emphasis is placed in the Report on the values of general education, in all stages of the process of higher education as well as in relation to vocational education. But I believe Hutchins's criticism is wrong for two reasons. First, the sense in which the Commission uses the term 'vocational education' is, with one exception, primarily that of professional and semi-professional training. The exception is in the work of the community college and particularly in the adult education program included in its scope, which may be of a more specific service nature. The theory is that the vocational training will make the general education meaningful to the student as he sees the application in specific projects and is given security in the training for particular work as well as preparation for the more general experiences of human relations. Second, the Commission

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is studying higher education in the light of its social role. Recognizing the need for trained personnel, universities are called upon greatly to increase their training in the professions. "Institutions of higher education must assume their full share of responsibility for providing a sufficient number of qualified persons in all fields to satisfy the demands of society."¹

In Hutchins's view, the primary aim of the university is the development of intellectual power. Any other aim is secondary and may be included only insofar as it does not interfere with the first.

Such an aim as adjustment to the environment is not merely secondary, it is wrong: it would prevent education from putting forth its noblest effort, the effort to produce men like Socrates and Gandhi, who were not adjusted to their environment, who did not 'get on well with people,' and who died because they did not.²

Hutchins refers specifically to the eleven basic objectives of general education listed above. Examined singly, I think that there are several, such as improvement and maintenance of health, which educators might assume to have been handled elsewhere--in the primary and secondary education if not in the home. This inclusiveness of the list seems to imply that education alone is responsible for satisfaction of some of the needs toward which the home and church, for example, should also be contributing. Nevertheless, as the work of a Presidential Commission, the proposals are made in terms of the

1. 63.

2. Hutchins, Art. (1948), 116-117.

problems of offering equal educational opportunity to all those deserving on the basis of ability and interest. Other aptitudes than "verbal aptitudes and a capacity for grasping abstractions"¹ must also be cultivated; proper social adjustment may be a prerequisite to the socially valuable use of intellectual power.

The Commission is faced with a problem, which Hutchins calls to attention, of criticizing the over-specialization of liberal arts colleges today and at the same time advocating great diversity in the general education curriculum. The integration essential to the latter must be realized if the same problem is to be avoided. When Hutchins says, however, that the primary objective of general education, "to bring out our common humanity," is "confused at every point...with the education of our individual differences, which is secondary and in many cases unnecessary,"² I think he is considering as a unit aims which the Commission presents as distinct but equally important. The Commission states specifically its concern that the student become familiar with his cultural heritage, but that he be enabled to "identify, interpret, select, and build into his own life those components of his cultural heritage that contribute richly to understanding and appreciation of the world in which he lives."³

The essence of Hutchins's criticisms, however, must be analyzed carefully by the Commission. The vast expenditure of effort and of money to carry out the proposals of the

1. 32. 2. Hutchins, Art. (1948), 119. 3. 49.

Commission will be of little avail if the direction of the educational system is wrong. Hutchins believes the Report to be without direction. The need for a moral, intellectual, and spiritual revolution which is his primary concern demands first a recognition of what the revolution will involve and then a determination of the relationship to it of higher education. This he feels has not been done by the Commission.

The objectives listed above in the Report may be cited in defense of the Commission's work. Because many of these goals are very general in nature, because their mode of statement often deviates from that typical of educational theory, because problems of organization, finance, method, on the national, state, and local levels are treated extensively, and, because many of the needs and their solutions are familiar to us, the Report may indeed appear to lack direction. The task which has been undertaken is tremendous. The goal of the Commission is to revise higher education in whatever ways necessary in the direction of educating free men to live in a free society.

3. There are several specific points as well as some pervasive theories which correlate closely with Dewey's educational theory. The most outstanding of these is the continued emphasis on the social role of the school. The method of the Commission in analyzing first, in a very general way, the problems which our country faces today and then proposing certain revisions and additions to the work of higher education is

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much the same as Dewey's method of studying the role of the school in the community. In discussing each aspect of its task, the Commission points out regularly that the school is an instrument of social transition, that higher education provides the chance to learn in order to be a more useful citizen, that students must prepare to assume their social responsibilities. Even the detached scholar, as mentioned above, must "have a passionate concern for human betterment, for the improvement of social conditions, and of relations among men."¹

The need for application of the scientific method to problems of social as well as natural science which Dewey advocates strongly is urged also by the Commission. An argument similar to that found in Problems of Men is used to demonstrate this need, that is, that progress in some areas of great concern to men for centuries, such as smallpox plagues, were not eliminated in spite of the intense fears and the desires to eliminate them, until science and technology could be applied to them. The point is that we must have technical training and knowledge in the field of human relations also.

This approach is based upon the belief, as in Dewey's theory, that men's attitudes can be changed significantly for the progress of society. Dewey encourages the application of the experimental method to social problems in order to effect changes in the individual which are qualitative and internal, which lead to greater use of his abilities, to a realization

1. 91.

of himself. The Commission has the same objective in mind. The removal of social tensions will increase the effectiveness of democracy, the purpose of which is the liberation of the of the intrinsic powers of its citizens.

As the value of education is seen by Dewey primarily in terms of the action resulting from it, so is it for the Commission.

The purpose of general education should be understanding in terms of performance, of behaviour, not in terms of mastering particular bodies of knowledge.¹

In accordance with this position, the importance of "extra-curricular" campus activities and participation in community projects is stressed by the Commission.

Since the points mentioned are of importance in the Report, the conclusion may be drawn that the Commission is generally more in agreement with the educational theory of Dewey than that of Hutchins. Although a program of general education is advocated, Hutchins criticizes it in terms of its aims, content, and method. Two of the primary objectives of the general education program as outlined in the Report, however, the integration of learning and education for responsible citizenship, are of primary importance to Dewey. Also, the Commission was particularly instructed to examine higher education in terms of its social role.

4. It is more difficult to point to definite parallels or disagreements in a comparison of the Report with Whitehead's

1. 50.

educational theory. Whitehead's theory is best understood in the context of his metaphysics. Although the proposals of the Commission must ultimately rest on some metaphysical system, nowhere in the Report is any system discussed. One may only recall that there are certain similarities with Dewey's philosophy, remembering that his philosophy was developed after his initial work in education. I refer particularly to the concern with the formation and change of attitudes and the interest in the social aspect of man's nature--descriptions of his behaviour.

It will be seen, however, that there is agreement with Whitehead on several points. Whitehead emphasizes the need for education to be useful both for personal growth and for some specialized power which will be socially valuable. The position of the Commission on this point has been indicated above in the discussion of the complementary nature of general and vocational education.

In his outline of the professional training most advisable, Whitehead recommends a combination of the activity of the profession with a theoretical analysis of it, neither one alone being adequate. This is also the position of the Commission, as seen in the proposals that general education should be continued in the graduate and professional schools.

The element of change and activity which is basic to Whitehead's process philosophy is one of interaction of the organism with its environment as well as with 'potentiality.' Whether or not from the same logic, there are elements

throughout the Report which refer to the constant change in our environment, physical and social, and of the adjustments which we must make to it as participants. Certain factors of the environment are given and unyielding; others which are not we must control in whatever way is necessary for our goal as free men in a free society.

5. It is desirable here to see to what degree the work of the Commission satisfies the requirements of our definition of the function of universities. The first point, that the work of a university involves preserving, interpreting, and passing on our cultural heritage, is the principle objective of general education as proposed by the Commission. "A society whose members lack a body of common experience and common knowledge is a society without a fundamental culture."¹ Transmission of the nonspecialized and nonvocational learning which is this common experience is the work of general education. The student is to be helped to select, interpret, and incorporate those elements of the cultural heritage which will increase his understanding and appreciation of the world.

The second requirement of our definition is the stimulation of original work and research. It is with reference to one aspect of this point that I think the Report is most inadequate. Certainly research in the application of the experimental method to the problems of human relations is strongly urged.

1. 48-49.

responsibility to society.

If this analysis is correct, on the whole the Commission is trying to guide higher education in the proper direction. Because this is a governmental report, it is necessary to some degree to do what Hutchins criticizes, that is, to be broadly inclusive. In our society, education must be organized to allow for maximum diversity within the scope of the broad objective, training responsible citizens to live in a democratic society. Elaboration of a metaphysical system as a basis is not constant with this assignment; neither would a statement of values that is narrow in its specificity be permissible. Examined from the perspective of educational theory, the Report lacks a coherent and systematic philosophical foundation. When it is studied as a governmental statement proposing revision and revitalization of higher education in a democracy, we may conclude that it has more satisfactorily fulfilled its function.

CHAPTER V.

A STUDENT'S POINT OF VIEW

The extensive concern with education in the United States today is evidence of the opinion that American education is not fully meeting its responsibilities. This feeling is expressed by Hutchins, Dewey, Whitehead, members of the President's Commission on Higher Education, and many others. There are several aspects of the problem which I feel have not been considered sufficiently by the theories examined in the preceding chapters or about which I should like to make additional suggestions.¹

1. It is necessary to recognize first that contemporary life in the United States is neither academic nor abstract, and that it is changing. Old social, political, and economic values and the forms of society which express them have been seriously questioned as being inadequate to the present crisis. The relative stability which we may seem to have achieved is even less secure now, for men everywhere are being forced to adjust to a world threatened by the destructive powers of atomic energy as well as the potential economic revolution

1. Many of the views presented in this chapter are the result of study of the theories of Hutchins, Dewey, and Whitehead. Specific mention should also be made of discussions with President Harold Taylor and of work with International Student Service and the National Student Association, 1946-1949.

which will follow its constructive application. We have men who are frighteningly certain and those who are frighteningly uncertain of their beliefs.

This is the contemporary situation with which education must concern itself. If the endeavor is to be successful, the educational theory which directs it must be founded upon a consistent concept of man. I should like to review briefly the theories of Hutchins, Dewey, and Whitehead on this point and to indicate my own view.

For Hutchins, "Man is a moral, rational, and spiritual being¹...Human nature is, always has been, and always will be everywhere the same."² Man's acts should be governed by the laws of wisdom and goodness, not by acquisition. His aim is to discover truth--the theoretical truth of conformance to reality, the practical truth of the goodness of the end in view.³ The end of our moral and intellectual development is the freedom of autonomy.⁴ If students are taught to lead the life of reason, education will have done the best thing it can "for the whole man."⁵ Cultivation of the intellect and the use of abstract reason are the ends of education and are ends in themselves; if education accomplishes these purposes, it will have fulfilled its function of making a rational animal more perfectly rational.

In contrast to this theory is Dewey's. The essence of

1. Hutchins, EF, 44.

3. Hutchins, EF, 85

5. Hutchins, EF, 37.

2. Hutchins, Ef, 26.

4. Hutchins, EF, 92.

Dewey's concept of man is that the individual is constantly growing. The condition of his environment, cultural and physical, are important as they contribute to or restrict this growth. Man's innate needs, (i.e., physical needs,) do not vary, but the ways in which they are expressed, his attitudes and habits, do change. There are qualitative and internal changes in man as he adjusts to changes in time. "Civilization itself is the product of altered human nature."¹ The way in which each man expresses himself is determined to a great degree by social conditions. The individual must never be considered in isolation from the society in which he exists. He is always responsible for being a positively participating member of that society. Many of his interests and abilities can be developed only as he is a member of the group. Education must help the student gain an understanding of his role in the social order, the direction of the changes taking place in it, how he may make a socially valuable contribution.

Hutchins emphasizes the sameness in human nature, Dewey the respects in which it is changing. These two principles are combined in Whitehead's theory. In this view of the world as an organism, the basic unit of reality is the living, organic, actual occasion. These self-creating entities are mutually related, complex and differentiated, but interdependent. Man, although technically a society of such entities, may be considered as one actuality. His essence is constant activity,

1. Dewey, POM, 190.

unified and directed by his purpose in the process of development. There are 'eternal objects,' the universal ideas, the limitless potentialities, which may be compared with the fixed principles in Hutchins's philosophy. There is the incessant activity of the actual occasions in their process of realizing their subjective aims, which provides the basic element of change that Dewey wants. In addition to these principles is the emphasis on novelty, adventure, and especially creativity. The process is characterized by creative advance. Finally, prehensions, or feelings of feelings, are the means of achieving the relatedness of the events.

It is essentially Whitehead's position which I accept. His metaphysical theory, as I understand it, seems to be more comprehensive than the others, to be internally consistent and yet to correspond accurately with the facts of experience. It is his concept of man which I should like to use as the basis of an educational theory.

2. The university is not an institution which functions in isolation from the life of the rest of the community. There is an interaction between the universities and other institutions of the society. For this reason, it has been necessary to examine the social theories of the philosophies discussed also, in order to understand more clearly the implications of the theories proposed. Again I would like to review the positions of Hutchins, Dewey, and Whitehead.

Men join together to form a society, according to Hutchins, for the development of the moral, spiritual, and intellectual powers. The state is a means to the happiness and virtue of its citizens. Our present society is largely dominated by materialism; men must join together in a moral, intellectual, and spiritual revolution to throw off this yoke. Acquisition of material goods --the standard of judgment of materialism-- must be replaced by the principle of equitable distribution of these goods. Education enables us to inquire into the nature of man and society, to determine the good life, to guide the spiritual revolution toward the good society.

Dewey advocates a different approach to the problem of social progress. The scientific method he believes should be applied to the field of social sciences as well as natural sciences. Since human nature is capable of change, we should find out under what conditions positive change is to be effected. Much of the training can be given in the schools, guided by the principles of liberalism and the democratic faith. The focus is on contemporary problems; the task of education is to give us understanding of the problems, the forces at work in them, the values involved in the struggle of the evolution toward a reconstructed social order. The individual student must be helped to see his place in the social order and his role as a responsible member of the society. His understanding should culminate in action of value to the community.

Whitehead's theory is based on the social aspect of the

nature of the actual occasion. Social responsibility is inherent in the nature of the entity, for the individual can be considered in isolation only for purposes of abstraction. The concrescence of the entity involves the proper drawing upon, integration of, and adjustment to the elements of the environment. Throughout the process, the entity serves as an element in the development of other members of the society. The educational theory which follows includes elements of both Hutchins's and Dewey's theories.

In Whitehead's view, the individual, although not living in the predominantly static world which Hutchins indicates, should be constantly aware of the significance of his past in understanding his present situation, for his history is included in his present moment of experience. The importance which Hutchins attaches to the cultivation of the intellect is similar to Whitehead's affirmation of the value of speculative thought, for each is based on the belief that reason can penetrate to the ultimate nature of things, and, thus, to the solution of our pressing problems. With Dewey, Whitehead wants education to train the student for socially valuable work as well as for personal growth, and to be concerned with the opinions men hold and the way in which they hold them.

Although each of these theories is directed toward the development of good citizens, there is difference of opinion as to the method which contributes to maximum development. I prefer the concept of constant change of Dewey and Whitehead, and

the stress on social responsibility, rather than the static concept of Hutchins and the more clearly Platonic approach to "the good society." One cannot deny the importance of an investigation of our intellectual heritage for learning from the experience of others those principles which are still valid and which may be applied to our contemporary problems. Dewey's urging of the employment of the scientific method is also important to an understanding of these problems. In addition to the use of abstract speculation and learning through experience, Whitehead includes the adventure and creativity of speculative thought and the valuation in the contribution of feeling as significant forces at our command to enrich our personal growth and to apply to the problems of our society. It is the combination of all of these points which I think is important.

3. The specific theory regarding university education which follows from these philosophical positions may be easily understood. Hutchins wants a university in which the work is in metaphysics, social science, and natural science. The university work should follow a program of general education, which will be valuable also for those who will go no farther with their education. This program should provide for all students a "common stock of ideas and common methods of dealing with them."¹ The place for specialization is not in the university, but in technical and research institutes, which the student should attend only after having completed his

1. Hutchins, HLA, 85.

university work.

Dewey opposes this separation of the primarily intellectual and the practical studies. In accordance with his principle of the importance of direct experience in the learning process, he wants the student to examine the information and the values which he learns in terms of their practical application. He asks both for the broadening of the use of scientific method to operate in the area of human relations and, at the same time, for 'humanization' of the strictly scientific studies. Greater integration of the subject matter in terms of the student's interests, and focus on contemporary issues and social values, are the methods he proposes.

Whitehead is concerned also with the immediate experience of the student, but not to the neglect of the past. He agrees with Dewey that the study should eventuate in a special ability which will enable the student to make a direct contribution to his community in a valuable way, and that the vocational training should be integrated with the liberal education. The scholarship which must supplement speculative thought, which gives attention to the methodologies which have been accepted, is again similar to Hutchins's view. There is freedom in the adventurous spirit seeking after new perfections, but it is limited by the demands of logic and of coherence with the facts of experience. The university must provide for both. The particular contribution which Whitehead makes to this question is the significance of imagination, the freshness of spontaneity,

and of originality, in the total educational process.

It is important to note again the degree of synthesis which Whitehead has achieved. He has included the essence of Hutchins's and Dewey's theories and he has added to this combination new elements of originality and feeling which are important. I believe that Whitehead has avoided the extremes of either position while integrating the principles of both with significant additions.

4. It is important at this point to review also the relation of these theories to the definition of the function of the university which is offered as the thesis of this study. The first requirement of this definition is that of preserving, interpreting, and passing on our cultural heritage. The theories of Hutchins and Whitehead evidently satisfy this demand. Dewey is less explicit on this point. I think it may be assumed that, as the student pursues thoroughly the problem with which he is concerned, he will find it necessary to examine the work of the past; but the emphasis is on the use of this study as a means to understanding present issues rather than for enjoyment of the ideas in themselves. The teacher, however, must keep this need in mind while guiding the student's interest.

The second point of the definition is the stimulation of original work and research. Hutchins designates specific research work to be done at the post-university level. A certain type of research is implied in an adequate study of the classics. Dewey means by research primarily the application of the

scientific method to the problems of the social sciences. It is Whitehead who stresses particularly the importance of originality of thought, the search for new perfections, to supplement traditional scholarly investigation.

The final requirement of the definition is the training of free minds with a sense of responsibility to society. Hutchins would free the mind from the complexities of immediate issues by giving it the perspective gained from study of the classics; responsibility to society is expressed in the philosophical determination of concepts of the good life and the good society, and by participation in the spiritual revolution to realize these concepts. Dewey wants to free the mind from the type of information which does not relate to present problems, to free the student from an educational system which is directed primarily to verbal skills and intellectual interests. He conceives the moral end of the educational system to be its participation in the life of the community. Whitehead's position on this point includes mention again of the creativity, the adventure of ideas, which for him is also part of the process of freeing the mind. The element of mutual relatedness of the actual occasions which is basic to his metaphysics underlines the essential social responsibility of the individual.

It is my opinion that Whitehead's educational theory, as analyzed here, satisfies most adequately the definition of the function of the university used as the major contention of this study. Each aspect of the definition is included in his theory

in a significant way, and each point is consistent in the context of his metaphysical theory. For these reasons I feel that Whitehead's philosophy offers a rich and constructive basis for an educational theory, and I should like to see more thorough and extensive application of it for a revitalization and a re-direction of our educational system.

Finally, I should like to mention again briefly the conclusion drawn from examination of the Report of the President's Commission on Higher Education as it relates to our definition of the function of the university. The program of general education advocated by the Commission is specifically offered to provide the body of common experience and common knowledge which is included in the first point of the definition. The Commission recommends with regard to research, as does Dewey, investigation of the problems of human relations, using the experimental method. However, little attention is given specifically to the need for stimulating original thought. Finally, the conclusions throughout the Report relate to the problems of higher education in terms of the social role it must play. The Report is the work of a governmental commission. The fundamental theory of man and society on which it rests is never clearly presented, except for a general statement of issues and principles of American democracy as the context in which the colleges and universities function.

5. With this summary to indicate the objectives toward which higher education in the United States should be directed,

I would like to discuss some specific techniques for implementation of these principles. It may seem that the techniques suggested are consonant particularly with Dewey's theory. In general this is true. Some of them have been suggested by educators who advocate this approach. Nevertheless, I believe that they are also valid for the application of Whitehead's theory, and that certain fundamental points might also be incorporated in the classics curriculum.

The learning process, the response of an individual to a new situation, involves two things. The ability to grasp the meaning of an event depends upon the process of relating factors of the present situation to the knowledge one already has. But it depends also on recognizing the specifically new factors in the situation and determining their significance in relation to earlier judgments. Each person responds to a given situation in his own way and has a unique body of knowledge with which to integrate the new experience. In theory, at any rate, we encourage this diversity as long as there is compliance with certain other standards.

Formal education, then, must consider both the uniqueness of the student and the conformity properly demanded by the society. Concern with individual development is one of the major emphases of the Report of the President's Commission. The Commission wants each student to receive the amount and kind of education and training which is appropriate to his capacities and which will help him to have a personally satisfying life.

And as the student understands present problems, learns to contribute toward social progress, he is learning also his obligations to that society, the degree to which he must limit his individuality as a cooperating member of the group.

The values which will guide the student in his understanding and his action, the values by which he must live and in accordance with which the society should be organized, can be learned. This is not the task of the universities alone. The personal influence of parents and teachers, for example, is a major source of this knowledge. The experience of the individual as he participates in various situations and the reflective thought by means of which he interprets and integrates the values of a specific idea, mode of conduct, or technique, is another source.

The educational system which will help most effectively to teach these values, in my opinion, will not be based upon the conflict of the 'material' and the 'spiritual,' with the corollary distinction between the vocational and the liberal in education. On the contrary, the spiritual and material should be seen as two aspects of one reality. The ideal toward which we should aim is to help men to recognize that their aesthetic, religious, vocational, and social activities are complementary and supplementary expressions of themselves. In order to do this, I believe that the liberal and vocational aspects of education should be integrated as closely as possible. This does not mean necessarily that intensive work in both should be

given in one institution to each student. Specialized professional and technical training should be offered in specific institutions. But this work should not exclude a liberal education as recommended, for example, by the President's Commission. In the program which is concerned primarily with liberal education, the student should understand the practical application of what he is learning and should be enabled to make a socially valuable contribution.

In accordance with this view, all college life should be considered as a whole. This means, for example, utilizing the cultural pluralism--the diverse nationality groups and "extra-curricular" activities--of the campus and the community as part of the **total** curriculum. Breaking down the barriers to education will help to add to the varied talents and personal qualities, cultural and economic groups, to enrich and broaden the environment in which the student develops. Field trips and community projects, social and political activity in the community, are additional techniques working toward the same goal. These things are not included in the course work given for credit. They have value in illustrating the function of the theory learned in the classroom.

There are two other principles which are more basic to educational theory in accordance with this view. The first is that, if we are really to believe with reason in our values, these beliefs must be emotionally held and must be acted upon. They must be integrated into a personal philosophy and used if

they are not to decay. Moral values will be developed, for example, as the student knows what values are the basis of the attitudes expressed in his activities in personal and community relations. If he is to carry these beyond his college years, the college community must contain within it the atmosphere in which his ideals may be tested and extended to the major problems of contemporary life.

The second principle, which is closely related to the first, is that immediate experience is the starting point of the learning process and that if general ideas are the end, they are meaningful only if they are understood in terms of personal experience. The function of the general ideas, in turn, is to transform immediate experience. We learn things through living them. Intelligence is an aspect of our total personality; genuine learning involves the interplay of our emotive and conative efforts with our intellect. We learn from our feelings and our strivings to integrate new experiences with our aims.

If these principles are valid and if a primary aim of our universities is to help us determine by what values we can live most nobly, how our society should be organized to make this possible, it would seem that the center of the curriculum should be the major and controversial questions of contemporary life. We want to know what the basic issues are and how we can help to settle them. We want to know what our role is, and our responsibilities. We cannot expect our educators to know and to tell us precisely how to act and to think if our society is

to progress, nor is that what we want; but we do want help in understanding the nature of the problems and the forces which are determining our futures. A curriculum of integrated studies which are compulsory may help to foster a community of knowledge among students, but that may or may not contribute to a socially relevant education. The breadth of knowledge which was felt to be lost in the elective system may have been returned, but it may have as little effect on the student as, for example, the course in a foreign language necessary only to satisfy a requirement for graduation. The integration of the subject-matter into a student's experience will be due more to the degree of his own interest in his development.

Again I should like to point out that by 'interest' I do not mean 'whim,' and by wanting to consider present issues I do not advocate the 'immediacy' of which Dewey is accused. I want the education to reach the student at his own interest level so that it will be more directly meaningful to him and so that he will become personally involved as he advances. This is also the primary reason for wanting to center the curriculum around important issues. It cannot be assumed that the student will see actually the personal relevance of these issues in every case. Very often, however, he can be made to realize that personal problems with which he is concerned are in reality examples of these questions on a limited level. It is the responsibility of the teacher to demonstrate that the problems of the student depend for their solution upon a background of

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is essential for ensuring transparency and accountability in the organization's operations.

2. The second part outlines the various methods and tools used to collect and analyze data. It mentions the use of surveys, interviews, and focus groups to gather information from stakeholders. Additionally, it discusses the application of statistical software to process and interpret the collected data.

3. The third part describes the results of the data analysis. It highlights the key findings and trends identified, such as the increasing demand for certain services and the need for improved communication channels. It also notes any challenges encountered during the analysis process.

4. The fourth part provides recommendations based on the findings. It suggests implementing specific measures to address the identified issues, such as enhancing training programs and improving the efficiency of internal processes. It also recommends regular monitoring and evaluation to ensure the effectiveness of these measures.

5. The fifth part concludes the document by summarizing the overall findings and reiterating the importance of ongoing data collection and analysis. It expresses confidence in the organization's ability to implement the recommended changes and achieve its goals.

knowledge of the ideas involved, of the work which has already been done relevant to the problem, the ability to learn from the experiences of his predecessors. Further, a thorough investigation will indicate that the problem cannot be studied in isolation and that there are many other forces involved. If this experience is to have lasting value, the student must learn also how to discipline his thought. I refer to training in the laws of logic as well as in the scientific method.

Our greatest effort in an expanding social democracy must be to develop creative intelligence on the part of individuals whose opinions and knowledge will only be identical when they assent to important propositions in which they believe intelligently.¹

If the core of the college curriculum is concerned with important and contemporary issues, I believe one step of significance will have been made toward the solution of a problem of primary importance to our colleges and universities, which has not been dealt with adequately in the educational theories considered. This is the problem of how to develop in the student a real 'thirst for knowledge.' When that interest has been developed and is genuine, then even the classical core curriculum, with, in my opinion, its more evident inadequacies discussed above, would be satisfactory. The student, consciously or not, would attempt to correlate the facts of one course with those of another for himself. The eagerness to learn would extend beyond immediate situations to the general ideas and the speculation of ultimate significance.

The question is how to stimulate this interest and, once

1. Taylor, Art. (1945), 558.

it is stimulated, how to see that the student both avoids the superficiality of too narrow specialization and reaches out for a broad basis of learning from which to select and integrate for his use. The goal is to develop the sort of interest in the student which, when satisfied, will have included the three parts of our definition of the function of the university. He will want to examine his heritage to see what has already been done on the problem with which he is concerned, to understand the general trends and various approaches that are represented today. He will want to do systematic research on the problem and to add his own interpretation to what he has culled. Finally, there will be real zest in his work. He will be freeing his mind from the bonds of ignorance, freeing it for purposeful and effective action, and he will understand the consequences of his work in terms of social value. He will have the personal satisfaction of having made the material his own, by collecting it and interpreting it himself; and he will be more keen in his insight and more zealous in his endeavor when he sees the purpose toward which he is working.

I am afraid that it is necessary to assume that the majority of students who come to the universities do not have clearly in mind their purpose in studying. There are exceptions: some have youthful dreams which have to be examined and criticized; a few may really understand what they hope to accomplish. The basis on which the educator must work, however, is that the student neither knows actually what he wants from his

education nor what sort of education will help him find out what he wants.

The approach which seems most typical in our colleges and universities is to require the student to touch lightly the several branches of knowledge, generally in survey courses of the freshman and sophomore curriculum designed to give background knowledge. I think this is usually an unrealistic and unsatisfactory solution of the problem. Unless he has an exceptional professor, the student very often fails to see what is beneath the survey, what is the relationship of the courses, why the general background is necessary. Too often his field of specialization in the last two years is determined solely by a professor in any of these courses who may have been able to elicit some sort of creative response from the student, or a professor whose personality was appealing. This is particularly true of women students who assume that their livelihood is not going to depend upon their college education.

Some colleges have attempted to solve this problem by instituting a system of advisors for freshmen. This system has real value when the advisor is able to help the student realize his needs, interests, and abilities, and select courses accordingly. This counselling service should be maintained throughout the student's career, however, for the factors to be considered change constantly as the student matures. There must be an understanding, joint effort to discover the best sources to tap for the development of the individual student.

The real need is to have at the heart of the curriculum not merely a technique for integrating the subject-matter by having a literary critic and a physicist combine to teach a course in order to demonstrate the interrelationship of the material, but rather a motivating force of creating within the student a real desire for the sort of understanding that will require something from his cultural heritage to give it depth, something from his present experience to give it breadth, something of himself, through insight into possibilities of application, to give it meaning.

Development of the techniques which will accomplish this objective is one of the most pressing needs for investigation in educational research. The opportunities for working it out are greater in the small college where the atmosphere is more permissive of close faculty-student relationships. In the large university, however, where the problem may be even more keen, there are techniques which may be used successfully. An example is suggested by President Taylor. He proposes first that there should be fewer lectures and that, instead, copies of what the lecturer has to say should be distributed to the class. This would give the professor more time for talking with the students, for organizing discussion groups. The professor should then recruit from the talented students he knows a faculty of his own. He should meet with them weekly, discussing the ideas and the materials of the subject, training them as discussion leaders responsible for handling small

groups in the class in a sort of seminar fashion. Care must be taken to insure that the discussions are fruitful and get to the basic issues of the course.

This kind of experiment might serve as a source for the new teachers the educational system needs so badly. Each college must think of itself as a center of learning from which teachers will go. Whether they take on the professional duties of a teacher is not as important as that they believe so deeply in the things they have learned, that they want to share them with others.¹

The system of tutors for freshmen is another method of helping the individual student develop and broaden the interests and abilities as they are revealed.

Experience in education has demonstrated that students usually gain more from courses which are directly related to their recognized interests or problems. The desire to know about their own personality, for example, will take them with enthusiasm to courses in psychology. If this point is combined with the proposals to use other activities of the campus community as parts of the curriculum, another method for stimulating a genuine desire for learning will have been found.

One illustration of this technique relates to a situation which prevails on many campuses, the very serious financial problem facing many students. In colleges and universities throughout the country small groups of students have worked together on this problem by forming cooperative housing or eating units. Excited by the success of their venture in lowering living costs, the students are eager to study the principles of

1. Taylor, Art. (1948)¹, 15.

the cooperative movement as an economic theory, its possibilities of broader application, the history of its development, the psychological significance of the group spirit which is generated, the causes of the occasional economic discrimination with which they are met, their effectiveness as a political unit, cultural expressions of the group, cooperation on a national scale with other student cooperative groups, and so forth. If this "extra-curricular" activity, is considered instead as a "co-curricular" activity, a dynamic force may be put to work to accomplish the desired integration with great success.

The activities of students of member schools of the United States National Student Association may also be cited. The work of these students on the problems of academic freedom for faculty and students, student government structure and function, nation-wide surveys of vocational counselling and racial and religious discrimination, have direct bearing on a great part of the college curriculum. Participation in the annual National Student Congress gives the students a political maturity which can scarcely be provided in a class of political theory. The much longer period of lectures about the politics, social and economic conditions, history and language of other countries is made particularly meaningful in the few weeks that several hundred students who go abroad each summer under the auspices of the association spend in these countries. In addition, there is the less tangible but equally important realization

of their responsibilities as members of the student community, which is excellent training for responsible citizenship. And they see how closely the problems facing them as students relate to the larger community.

This cultivation of a sense of responsibility in students is another element of the approach which has been suggested that is significant in terms of the aim of the universities. If the contributions of students are recognized in the joint effort to make the educational process meaningful, if they are understood as young people who want seriously to take hold of their lives, to make their own value systems, and yet want guidance, a lasting educational effect will have been achieved.

Reference has been made above to the important point that a passing fancy of the student is not to be confused with the type of interest which may motivate more thorough study. Often it will be difficult to make this distinction. There is another equally important question related to it. On the one hand, we want to use the interest of the student as a starting point, so that he will become personally involved in his work. On the other hand, the possibility of over-specialization and narrowness will be increased if the student lacks a breadth of training in the light of which he can determine his major interest. If the student concentrates too early in his education on a specific interest, he may fail to discover possible interests of more importance in other fields of study. It is

to be hoped that the thorough study of a problem which indicates the interdependence of all fields of knowledge will provide this opportunity. Yet if his studying is too exclusively in terms of the relation of these fields to his particular problem, the opportunity will be ignored.

It is to avoid this possible error that a type of general education is generally prescribed for the first two years of university work, before the student may specialize. I wonder, however, if this does not involve the other danger of being less personally meaningful to the student. I agree that a free elective system is inadequate and that the student may properly be required to do a certain amount of work in each of the major fields of study. But to insist that all students do the same work during the freshman and sophomore years is not practical. For example, it was my experience that an introductory survey course in philosophy was of no value because my major work in this field included a more thorough study of the problems considered in the course, an unwise duplication of effort. One solution, then, may be to require a course in a general field for those students who will not do special work in that area. This course should be oriented as much as possible to situations in which the students may see the application of the theory.

There are certain other weaknesses which must be kept clearly in mind in employing methods which focus on the individual interests of the student. The incorporation of the

facts that emotions are important in the learning process, that each student learns for himself, that each is unique, may have some undesirable consequences in practice.

If...the individual is considered as a kind of flower which will unfold if it receives the nourishment of a kindly and free environment, it is possible that no solid structure of social values will be built in the process. It is often considered that sheer uninhibited growth of the individual to that form which it is natural for him to assume is the true aim of modern radical education. This reasoning has a streak of Aristotelianism in it which is badly suited to a philosophy which makes claims for contemporary relevance and, as a kind of laissez-faire liberalism, is more appropriate to a stable world in which solid moral values...already exist in profusion.¹

Another danger is a sort of introversion which may result from the effort to organize education in terms of the individual. This may be due to a misunderstanding of the relationship of the psychological interpretation of the learning process to the organization of education. Another possible danger is that of ego-centrism, if the student's concern with himself and his problems is not considered in terms of his obligations as a member of the group.

There is an additional problem of the possibility of misunderstanding the problem-solving technique, which the educator must seek to avoid. This is the fact that the importance of using this method is to help the student see the relationship of a particular issue to other problems. One might feel, for example, that a course of instruction in flying an airplane would satisfy the requirements of vocational training and involve an immediate interest of the student; but unless taken

1. Taylor, Art. (1948)¹, 7.

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in the context of a study of aeronautical engineering or leading to an examination of federal regulations of air traffic, and so forth, the course would not be a means to developing a genuine intellectual curiosity or training in the techniques for solving future problems. In many instances, a specific immediate problem is used to serve as a step toward an understanding of more universal and basic issues.

Finally, the student's interests and abilities must be developed so that, as Whitehead affirms, he knows the zest of imagination and of speculative thought, and experiences the adventures of ideas.

It must be remembered in a discussion of any educational theory that the validity of the theory can best be judged in terms of its effectiveness in realizing its aims. The logical consistency of the theory is of little value if it fails to be coherent with the facts of experience. The theory may tend to be abstract, but the universities to which it is applied are not. The theory must be adaptable to change, if this is found necessary for practical application. Second, the theory itself is the means and not the end toward which the educational system is directed. The general education program, for example, may be criticized if the integration is successfully achieved but still fails to meet the needs of the students.

We must also remember that the atmosphere in which the universities function is constantly changing. The techniques

of education should constantly be analyzed to see if they yield an understanding of the crucial questions of contemporary life, if they help the individual to decide upon values, if they aid him in growing. New results in psychological or educational research, when applied to education, should offer considerable improvement in educational methods. Perhaps the only part of the philosophy of education which may remain constant is the concept of the individual who is to be educated. If we demand of a philosophy that it be consistent with the facts of experience, I believe that even at this point we must continue to reexamine in the light of new knowledge and maturity of judgment.

CHAPTER VI

CONCLUSIONS

The main conclusions of this thesis are the following;

1. The philosophy of Whitehead, in my opinion, serves most adequately as the foundation for an educational theory. The best of Hutchins's and Dewey's theories is synthesized, and important concepts have been added, expressed in the creative advance, which utilize feelings as well as the intellect and experience of the individual.

2. The major points in Whitehead's philosophy which are of educational value are:

i. There is essential activity in the nature of each actual occasion, the ultimate unity of reality.

ii. The concept of interrelatedness is inherent in each actual occasion, and therefore more basic to this philosophy than to Hutchins's or Dewey's;

iii. A social concept unifying the whole universe is found in the idea of prehensions.

iv. The past experience of the actual occasion is included in its present moment.

v. Speculative thought and scholarship have distinct but complementary functions in education.

vi. Creativity, imagination, adventure, and feeling are

THE
SCHEDULE

First Prize, £1000. — To the person who shall have
the most correct solution of the following problem:
A certain number of men can do a piece of work in
a certain number of days. If there were 10 more men,
the work could be done in 10 days less. If there were
100 more men, the work could be done in 100 days less.
How many men can do the work in 100 days?
Second Prize, £500. — To the person who shall have
the next best solution of the following problem:
A certain number of men can do a piece of work in
a certain number of days. If there were 10 more men,
the work could be done in 10 days less. If there were
100 more men, the work could be done in 100 days less.
How many men can do the work in 100 days?
Third Prize, £250. — To the person who shall have
the next best solution of the following problem:
A certain number of men can do a piece of work in
a certain number of days. If there were 10 more men,
the work could be done in 10 days less. If there were
100 more men, the work could be done in 100 days less.
How many men can do the work in 100 days?
Fourth Prize, £125. — To the person who shall have
the next best solution of the following problem:
A certain number of men can do a piece of work in
a certain number of days. If there were 10 more men,
the work could be done in 10 days less. If there were
100 more men, the work could be done in 100 days less.
How many men can do the work in 100 days?
Fifth Prize, £62.50. — To the person who shall have
the next best solution of the following problem:
A certain number of men can do a piece of work in
a certain number of days. If there were 10 more men,
the work could be done in 10 days less. If there were
100 more men, the work could be done in 100 days less.
How many men can do the work in 100 days?

also important in the educational process .

3. Some specific techniques which have been suggested in an attempt to reach the student in terms of his own interests are :

i. The education should be centered insofar as possible around important contemporary issues .

ii. Campus and community activities should be utilized for their 'co-curricular' value .

iii. The student should be helped to see the practical application of theories .

iv. An effort should be made to integrate the education in terms of the student's experience .

v. The student should be taught the principles of constructive thinking so that he will be able to use them in his life away from the university .

Education should help the student to determine by what values he may live most nobly and in accordance with which society must be organized .

ABSTRACT

The method of this study has been to examine the educational theories of Hutchins, Dewey, and Whitehead, insofar as possible, in the context of their underlying philosophy. Recognizing that an ultimate goal of each theory is the training of good citizens, it has been helpful to understand the concept of the man to be educated and the theory of the society in which he should be an effectively participating member. With this knowledge, we ^{could} ~~can~~ see more clearly the functions and organization of the universities which will help to realize the ideals.

Hutchins emphasizes the unchanging aspects of man and of the society. Believing that the universe is ultimately rational, he advocates primarily a philosophical approach to determine the nature of our fundamental problems. All students should receive a general education, according to Hutchins, so that they will hold in common a certain amount of knowledge of their heritage. All students who attend the university should study in the three departments of the university, metaphysics, natural science, and social science. Research work and technical training should be provided in separate institutions. Genuine social advance will have been achieved only when a spiritual, moral, and intellectual revolution has freed us from the ideals of materialism.

The changing aspects of man, his attitudes and beliefs, are the major concern of Dewey. The schools are centers of the values of the community. Their function is to give the student an understanding of the society of which he is a member and to show him his responsibility to apply the principles of liberalism in the solution of the pressing problems of the society. A specific technique which he urges is the use of the experimental method in the area of human relations. Vocational and liberal education should be integrated, and the personal experience of the student should be utilized to make the education meaningful. The focus of the education should be on present issues, and the understanding of the student should culminate in purposeful action.

A synthesis of these two views is achieved to some degree by Whitehead. The ultimate units of reality are 'drops of experience,' which he calls actual occasions. Man is a society of these entities. Interdependence and relatedness are inherent in the nature of each actual occasion; man's social responsibility is thus fundamental. In this respect, as well as in the essential activity of the entity, his philosophy is like Dewey's. Whitehead's concepts of the "eternal objects" and of the significance of the past in understanding the present experience of the individual, are similar to Hutchins's theory. In addition, Whitehead emphasizes the role of feelings, the importance of creativity, adventure, and imagination in the development of the individual. In education both past and immediate

experience must be included; original speculative thought must supplement scholarship. Vocational and liberal education need not conflict. The student should be given some training in socially valuable work.

Whitehead's philosophy, in my opinion, serves most adequately as the foundation for an educational theory. In addition to synthesizing essential principles of Hutchins's and Dewey's theories, he has added concepts expressed in the creative advance which utilize feelings as well as the intellect and experience of the individual.

As a criterion for this thesis a definition of the function of the university was offered with which to compare the educational theories considered. This definition is: the function of the university is that of preserving, interpreting, and passing on our cultural heritage, stimulating original work and research, and training free minds with a sense of responsibility to society. Particular attention was given to the third requirement of the definition. The investigation has shown, I believe, that Whitehead's theory satisfies most adequately the demands of the definition, although the third point is especially emphasized by Dewey.

The Report of the President's Commission on Higher Education was examined to determine the educational theory which it expresses. Although no specific reference was made in the Report to its philosophical orientation, the conclusion may be drawn that the Report generally is in accordance with Dewey's

theory. Specific proposals, such as the general education program, appear to be similar to those of Hutchins. The purposes of this program, however, are more like the objectives which Dewey advocates. The recommendations for higher education are substantially in accord with the definition of the function of the university offered above, with the exception that the task of stimulating original work is insufficiently stressed. Throughout the Report, the social role of colleges and universities is a major consideration.

Some specific techniques have been suggested which encourage attempts to reach the student in terms of his own interests. Centering the education around important contemporary issues, utilizing campus and community activities for their supplementary 'co-curricular' value, helping the student to see the practical application of theories, are specific methods. They are efforts toward enabling the student to integrate his formal education in terms of his personal experience and to carry from the university the principles of constructive thought. They should help the student to determine by what values he may live most nobly and in accordance with which society must be organized.

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1. The first part of the paper is devoted to a general discussion of the problem.

2. In the second part, we shall consider the special case of a linear system.

3. The third part is devoted to the study of the stability of the system.

4. In the fourth part, we shall discuss the question of the control of the system.

5. The fifth part is devoted to the study of the properties of the system.

6. In the sixth part, we shall consider the question of the synthesis of the control system.

7. The seventh part is devoted to the study of the properties of the system.

8. In the eighth part, we shall discuss the question of the control of the system.

9. The ninth part is devoted to the study of the properties of the system.

10. In the tenth part, we shall consider the question of the synthesis of the control system.

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